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INDUSTRIAL DEVELOPMENT IN SOUTH INDIA, 1880-1947

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I

The Political Context of Industrial Development

British South India in the late 19th and 20th centuries consisted of five major and distinct political entities - Madras Presidency, and the princely States of Hyderabad, Mysore, Travancore and Cochin. Conventionally, only Madras Presidency would be treated as part of "British" India; however in this paper, considerable emphasis will be laid on the fact of the relationship between the decision making autonomy in each of these political entities, and the fact that this autonomy was very largely determined by the paramount power - Great Britain through the Government of India which was responsible to the Secretary of State for India.[1]

The British Government in India was not, of course, based solely on the authority of the Secretary of State, or even of Parliament as a whole in Britain. The overall political structure depended precisely on the network of collaborating princes and the landed sections allied to them in the princely states; and to the more substantial sections of the

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agriculturists, largely dependent on rent incomes, in the presidencies and provinces directly under the Government of India (Dutt, 1947, 1970; Gopal, 1965, 1984, pp 7-15).[2]

Although this was the general pattern throughout British India, in each of the princely political entities of which South India was comprised, the relationship between the leading groups in the local power structure and the Government of India was distinct. This relationship and the degree of internal decision making autonomy it implied, was determined largely by the history of the relationship of the princely state to the Government of India. In those cases where loyalty had been demonstrably shown, the autonomy could be expected to be correspondingly greater.[3]

There was a further factor as far as economic policies, industrial development policies in particular, were concerned. This lay in the speed of development and in the growth of consciousness and articulateness of a business community, initially perhaps content with a purely trading role but increasingly assertive of its right to enter the field of industry proper (Leonard, 1981).[4]

The evolution of the political representation of this business community arose out of two relatively distinct processes, largely initiated by the Government of India in response to the continuing imperatives of India's colonial situation. The first was the encouragement given to the cultivation of cash crops for export and also the increased share

of food crops which were marketed or even exported. The compulsion here was the foreign exchange which would help meet Britain's growing deficit with countries outside the empire. The immediate relevance of these policies was the growth of trading capital and its concentration over time in the hands of relatively few big agriculturists or traders proper. The second, and in many ways the politically more significant development, was the growth of a body of educated public men - educated in the structure of higher education introduced originally so as to provide the personnel for the increasingly large administrative system. It was these individuals who demanded measures of the Government of India, and of the various subordinate Governments, that effective steps should be taken either to promote state owned enterprises or to encourage the growth of private large scale enterprises. Of course, it was true that most of these individuals were not interested in a narrow sense in industrialisation per se; and in fact many of their demands for democratic reforms would not have had the whole hearted approval of the business community. However there is abundant evidence for the fact that leaders of nationalist opinion in the British Provinces, and of the democratic movement in the princely States, helped to create the conditions which improved the prospects for the growth of industry.[5]

It is also important to note that the comparative analysis of the political regimes in South India helps to show that advanced policies of industrial development were current at a

very early stage, and that the lack of purposeful strategy in other parts of the country cannot be ascribed to the lack of knowledge, or to the lack of conditions for the dissemination of this knowledge in any objective sense. Mysore is, of course, the prime example of advanced policies, and these will be discussed in detail later.

However, there in one further point that needs to be addressed before the substantive discussion can begin: This is on the question of whether the administrative organs of the State - the Government - are necessarily (ie. theoretically) involved in any successful phase of economic development in general, industrial development in particular. The importance of this point lies in the fact that it is often argued that only in those economies or societies which are peculiar in their determination to industrialise - Japan and Germany - or where the business community is particularly hesitent to invest its resources in industry, does the Government need to play an active role. In other countries such as Great Britain or the United States in the 19th century, it is argued, industrial development took place more or less spontaneously. In third-world countries, termed "late developers" such as India, if the business community did not invest in industry at the rate at which capital was being centralised in the spheres of trade and moneylending, this was due to the relatively greater advantages of investment in this tertiary sector; and even if the Government did not play as active a role as Indian nationalists demanded, the efficacy of State intervention is, after all, a debatable issue. There is no

theoretical relationship, in this view, between intervention by the Government and successful industrialisation (Dewey, 1979).

Although, in the Indian case, this view was challenged some time ago (Bagchi, 1972), it still tends to reappear in historical writing (Morris, 1983). It is clear that the methodological issues raised cannot be resolved without further detailed empirical investigation (Gupta, 1987). In a sense this paper is, in its entirety, concerned with this issue. Still it is perhaps necessary to state categorically that a theoretical presupposition in its presentation is the due relationship between the interests of the economically dominant groups in a society and the policies followed by the Government. While in historically distinct periods and in response to different social structures the policies, say for industrialisation may vary, these are to be seen to be linked to the dominant classes in the social structure. In any case, it might be added, recent research into the economic history of a number of countries from the business history point of view has shown that there was a close connection between Government policies and the requirements of industrial development in specific historical situations (Nakagawa, 1980).

In this paper, industrialisation has been viewed as the process by which the business community accumulates, as reflected mainly by its control over a greater range of enterprises, though also by technological change within enterprises. Central to this

process in a colonial economy such as India's, is a consideration of the developments within cottage or household industries. While historically, hand production on a small scale has usually been superseded by large scale machine production, there are also exceptions, due to the specifics of the raw material used or the nature of the finished article.

In colonial South India, there were four major industries of the household kind that need to be considered. These were the cotton handloom weaving industry (mainly in Madras and Hyderabad), the sericulture industry (in Mysore) and the cashew and coir industries in Travancore and Cochin. While the cotton handloom and sericulture industries represent "traditional" industries in that hand weaving and silk spinning have been undertaken in India for a very long time, the other two are of recent origin and are due to the initiative of colonial firms. Coir weaving originated in 1859, while significant cashew production started as late as 1925.

One result of the greatest importance that recent research has identified is that developments in these industries in terms of the ways in which production was organised depended not only on the nature of the market and the technology in use. Decisions on whether production was to be organised in the homes of producers, or in centralised workshops, and on the different modes of payment in these arrangements had also to take account of the demands raised by a militant trade union movement. This was particularly the case in Travancore, and in both the cashew

and the coir industry, there are examples of a phased retreat from more organised forms of production in workshops to that of household based production (Issac, 1983 and Kannan, 1981). On the other hand, in the handloom industry there was a certain growth of production in centralised organisations, even though aggregate employment in the industry fell (Roy, 1987). In other words, the processes of industrial development are not only made more complex by the presence of the household industries, but within such industries the processes were often quite distinct.

II

Early Reforms in the Administrative Structures

The economic and social changes which were mentioned above - the growth of agricultural commodity production, centralisation of money capital in the hands of the large agriculturists and traders, and the growth of a self-consciously nationalist intelligentsia had led to political change in South India, exemplified by a change in the relationship between the administration of the princely States and the Government of India in some cases, and the development of partly elected district boards and municipalities in Madras Presidency. There was also structural changes in the political units themselves as a result of these economic developments.

In Hyderabad, there was a concentration of revenue earning powers in the hands of the Nizam's administration during the

later years of the Prime Ministership of Salar Jang I (1853 - 1883). With British encouragement, trade machanisms were improved by the reduction of the powers of the jagirdars to levy transit duties, and this also increased the revenues accruing to the administration from customs receipts. Together with the increase in land revenue (this was said to have risen by 163 per cent, presumably at current prices, between 1853 and 1882), the Hyderabad budget was in surplus for the first time in many years (Subba Rao, 1988). Through skillful use of differences in approach between the Government of India and financiers in England to Hyderabad's affairs, Salar Jang's administration was able to develop the railway network in the State, linking the cotton producing districts of Marathwada and the coal areas of Telengana to the capital. Improvement of the irrigation facilities, increase of groundnut production in Telengana, and introduction of improved varieties of cotton were symptomatic of increasing commodity production and exchange (Bawa, 1965; Ray, 1988; Sethia, 1988).

While the phase of reorganisation of the administration on more modern lines and the creation of infrastructure, including power generation and the tapping of coal resources, in Hyderabad lasted from about 1875 to 1919, a somewhat similar transformation took place in Mysore between 1881 and 1912. The period began with the introduction of "indirect rule" in Mysore after more or less direct rule imposed consequent to the collapse of the Tipu Sultan dynasty in 1799. Indirect rule implied that a Maharaja was reinstalled under the terms of a treaty by which most

substantive powers remained with the Government of India (Hettne, 1978). Further control was exercised by importing as Diwan (or chief administrator), officials from Madras Presidency who would clearly have no local base. It was inevitable that during this period economic change in Mysore was to a considerable degree dictated more by British commercial interests than by those of the rising business community in the State. Economic change essentially involved the growth of cotton growing and mulberry cultivation, which were added to the coffee plantations as major sectors of commodity production. A major area was also gold mining in Kolar which, in turn, led to the development of hydroelectric power at Sivasamudram. It is significant that the gold mines were operated by a London-based managing agency and were enormously profitable (Mysore, 1955; Sreenivasan, 1970). An early attempt to utilise the iron ore deposits in Mysore, of far greater long term economic importance, had to be abandoned as the Indian who offered to establish the iron works happened to be from Madras Presidency. Narrowly conceived nationalist opinion in Mysore objected to the "generous" terms which were offered by the administration in the collaboration (Hettne, 1978, pp.247 - 248; Ranjana Printers, 1968, pp.22-23).

In Travencore, the situation seems to have been somewhat different to Hyderabad or Mysore. The process of State formation here, in particular the specifics of the process of political centralisation led to a situation where by the end of the nineteenth century, almost 80 per cent of the cultivated land was

in the hands of the administration (Issac and Tharakan 1986). Preconditions for productivity growth therefore existed, with the encouragement to cultivation of waste lands by all groups in possession of an investable surplus, the generalised growth of peasant proprietorship and the provision of legal protection for some sections of the tenant peasantry (Lieten, 1975). By the beginning of the 20th century, about 75 per cent of cultivators owned their land; and in the 1930s as little as 15 per cent of the net agricultural income of Travancore was paid in the form of rent and taxes, while in the Malabar region of Madras Presidency as much as 60 per cent flowed out of the agricultural economy in these forms (Issac and Tharakan, 1986).

From 1858 onwards, the Travencore administration's monopoly over 165 items of foreign trade was abolished, under the pressure of the Government of India. Steps were also taken to bring the commercial laws of the State into agreement with the practices of British India, specifically Madras Presidency. Trading infrastructure was developed, linking the hills in the midlands and the High Ranges to the water heads formed in the backwaters, and the canal system. However the State monopoly which had been introduced in the mid 18th century had removed the chances of further growth of the indigenous trading groups. By the time the monopoly was removed, most of the substantial traders had withdrawn from overseas trade in favour of agriculture or internal trade. The enormous growth of Travencore's external trade took place, therefore, under the auspices of European coastal trading firms. The point to be noted is that unlike

other parts of South India, Travancore had a substantial base of prosperous sections of the peasantry. On the other hand, European firms almost monopolised plantation sector exports and imports as also the shipping, forwarding and insurance business connected with these. Imports of textiles, metal products and mineral oils were in the control of the foreign firms, or with Indian traders from the textile centres of Western India (Issac and Tharakan, 1986). Thus it would appear that despite the overwhelming presence of production for sale in the Travancore economy, indigenous industrialists would emerge if at all, not from the trading sections as in other parts of South India discussed so far, but from the prosperous sections of the peasantry. Another factor of importance is that unlike the cases discussed earlier, in Travancore foreign capital was extraordinarily powerful (Issac and Tharakan, 1986; Mahadevan, 1988). In addition, the institutional forms that this capital was embodied in, the forms of enterprise, their mutual inter-connections and their spheres of operation created, as will be seen, very strong barriers to entry even into fields in which they may not individually have been concerned. The direct influence of foreign commercial interests on the policies of the Travencore administration were correspondingly greater than in Mysore or even Hyderabad.

III

Industrial Promotion in Madras before World War I

In Madras Presidency, taking due account of its relatively bigger geographical and ecological spread, the processes of commodity production and growth of exchange relations were in similar ways driven forward by the extension of cash crops such as tobacco and cotton (Washbrook, 1976; Baker, 1984). What makes the Presidency stand out as unique in the pre World War I days is the early development of an industrial policy centred around a Government Department specifically for industries.

It is interesting that a Department was established first in Madras, which was generally industrially backward in comparison to the other British Presidencies of Bengal and Bombay (Swaminathan, 1988). It is necessary to emphasise the fact that full credit should be given to Alfred Chatterton, the first "Director of Industrial and Technical Inquiries" for the pioneering work he initiated in the technological upgradation of several small-scale industries. However, it is equally important to note that his efforts were based on the understanding of the possible effects of the aspirations of a nascent urban middle class section, alienated from direct involvement in agriculture but with no resources or inclination to enter the business world; these sections, if provided with liberal education would increase the pressure on entry to the urban professions and provide leadership to nationalist sentiment (Basu, 1982; Chatterton,

1912). Encouragement to industrial developments within technologically simple industries was then an appropriate way to divert the energies of this stratum (Chatterton, 1912).

The impetus to technical education did in fact predate the concern with "technical inquiries", and it is clear that it was the realisation that the technically trained would have little chances of employment, unless industrial development took place, that provided the rationale for official support to individuals like Chatterton (Swaminathan, 1988). The question that remains to be answered, of course, is that of the retarded development of industry in Madras as compared to Bengal or Bombay, which led to a situation where there was at least a perception in Madras that opportunities for employment would not be provided by the growth of industry taking place on the basis of private calculations alone. The late development of industry in Madras is a question that has not been directly addressed to date. Specifically, the reasons why the spinning capacity catering to handloom needs did not grow until as late as the 1930s, in a way to supplant imports of yarn - whether under British or Indian auspices - has not been researched, although the constraint on power availability due to the absence of suitable coal deposits is well recognised.

Whatever may have been the impetus for allowing Chatterton's efforts to get under way, the results of his work were important for two reasons. Firstly, the industries he chose for his major experiments - handloom weaving, chrome tanning of leather and aluminium utensil manufacture were technologically simple

industries, and in the case of the first two, represented organisational innovations in addition to technological upgradation. They were appropriate therefore, for the transformation of the leather manufacturers in the Presidency, who were little more than merchants, and the merchant - middlemen in the handloom industry, into industrialists albeit at low levels of technical development (Chatterton, 1912). These were, then, attempts to develop capitalist entrepreneurs from "below", a problem that will be discussed in detail later. Equally significantly, the industries that Chatterton chose were ones where Indian capital predominated, at least in the Madras Presidency. Although large scale exports of semi-finished leather may have been in the hands of British firms, the actual procurement of leather and the basic processing undertaken on it were with Indians, who were also exporters in a small way.

Thus the generalised application of chrome leather tanning would have added to the value-added retained by Indian interests, in addition to freeing them, somewhat, from the necessity of seeking ties with those agents abroad who had the facilities for finishing the leather; these were often in formal or informal partnership with the large British exporters. Similarly, the development of handloom manufactories would have provided for industrially - based capital accumulation, and a secure base for the transition to powerloom weaving and integrated textile-mill cloth production by handloom capitalists, predominantly Indian.

Inspite of Chatterton's protestations that he was aiding the interests of all capitalists by the institution of the Salem Weaving manufactory, and the chrome tanning and the aluminium utensil department of the Government School of Arts, and had no intention of competing with them, these attempts met with serious opposition from British Commercial interests. These escalated with time to an extent where the Department of Industries was closed down on the orders of the Secretary of State for India (Swaminathan, 1988). Significantly, the initial expression of opposition to the aluminium venture came from the Secretary of the Punjab Trades Association, while the interests of the British Chrome Tanners in Kanpur were upheld in the Madras Chamber of Commerce's objections to the chrome tanning experiment. There appeared to be a high degree of interest amongst the Indian tanners in chrome tanning, while aluminium work developed in both the city of Madras and in smaller urban centres. There is little reason to doubt, therefore, that industrial development in Madras was hindered by the effective opposition of British interests in various parts of India. In fact, in the case of handloom weaving, the affected interests were the Missionary manufacturers in Malabar on the West coast (Raghaviah, 1990, p.49); the official history of Binnys however admits that these Managing Agents for the large Buckingham and Carnatic Mills were also opposed to the Salem factory (DeSouza, 1969, pp.. 162 - 163).

By the end of the first subperiod, dating from the last quarter of the 19th century to the beginning of the First World War, industrial development took place largely as a response to

the growth of commodity production in the agrarian sector. Cultivation of groundnut, cotton and the increasing proportion of paddy produced for sale led to the installation of decorticators, gins and presses, and rice mills. Unfortunately these developments cannot be traced in detail, because upto 19.. the Factories Act excluded enterprises that worked for less than four months in the year. Even those that did operate for this period, but employed less than 50 workers were excluded from the Act and therefore from the domain of official statistics. However, it is significant that in a representative encyclopedia of South India of the time, a very large proportion of the citizens-of-note appear to be owners of rice mills and groundnut decorticating units (Playne, 1915).

In the absence of electric power in most urban areas at the time, let alone in rural areas, many of these agro-processing units were run with power supplied by oil engines. The machinery used was elementary, but the fact remains that the demand for simple capital goods of this kind would have grown enormously. There is no information as yet systematically collected to show the source of the machinery used in these enterprises. The immediate question of concern is, however, why there was no noticeable growth in the number of mechanical engineering workshops capable of producing this kind of simple equipment. The large number of railway workshops in the country would have created a relatively big stock of personnel trained in metal working and, given the importance of a base such as this for future development of the mechanical engineering industry, this

is a question that requires detailed empirical investigation. However, the fact remains that no such machinery producing sector emerged. It should be noted that during the period, manufacture of simple lathes had been recorded in the Punjab (Latifi, 1912).

To the extent to which the equipment producing sector occasioned by the demand for machinery did not grow, to the same extent the internal market for skilled and unskilled manpower, and for the metallurgy-based raw materials also did not develop. This early impulse towards industrialisation set off by the growth of commercial crops had, therefore, little effect.

IV

Industries in South India upto World War I

The major industry to grow during this period was, of course, the cotton textile industry (Bhogendranath, 1957; Mahadevan, 1973 and 1984; Baker, 1984). Particularly in the Madras Presidency, British Managing Agencies actively aided by the Government established a number of spinning mills and a few integrated units, weaving cloth in addition to spinning. The first spinning mill came up, in fact, as early as 1870 at Rajahmundry under a European Managing Agency but seems to have been liquidated in a short time. A little later another spinning mill was established in Madras city by Bombay capitalists producing yarn for export to China. With the modernisation of the mills in Bombay this mill became uncompetitive and it seems to have changed hands, having been taken over by the promoters of

the third mill to be established in 1875, the Madras United Spinning and Weaving Company. This was the first mill in the Presidency to survive for a substantial period, being liquidated in 1939. The promoter was also a Bombay capitalist with interests in the cotton trade, ginning and pressing factories, and textile mills in Bombay Presidency. In 1876, Binnys established the Buckingham Mills and followed this with the Carnatic Mill in 1884. In the years upto 1892, a number of major British Managing Agencies, A. and F. Harvey and Stanes set up mainly spinning mills. Harveys started with the water powered mill, a proposal for which had been suggested as early as 1869 by the Governor of the Presidency, at Papanasam falls in Tinnevelly district in 1885; another at Tuticorin in 1889, substantially enlarged in 1898, and a third at Madurai in 1892. Stanes, with large interests in coffee, set up the Coimbatore Spinning and Weaving Mill in 1890, and took control of another one in 1910. Thus, within a short period of time, British capital dominated the Madras Textile industry. It was evidently far easier for these British agencies to raise capital from Europeans in Madras or even in England, and the large size of these enterprises dwarfed Indian ventures. While Harveys and Binnys controlled 70000 spindles by the 1890s, Stanes had 50000 by 1910. In addition, in the export of yarn to China the British commercial links considerably helped these firms. About 20 per cent of the yarn was exported, while the rest was supplied to handloom weavers. Fuel costs were also a problem for the smaller Indian Mills. While in Coimbatore, firewood was used, in Madras both Binnys and the Madras United Mill brought coal from north India in the face

of high freight charges.

During this period, the raw cotton available in Madras Presidency was such as to enable the spinning of yarns only of low count. The coarse cloth produced from this could not find a market segment between handloom cloth and the finer quality imports. Thus, apart from the Binnys mills, most of the others confined themselves to yarn production.

During this period, another venture by Bombay based capital was the Malabar Spinning and Weaving Mill at Calicut, registered in 1883-84. Prominent Nattukottai Chettiar bankers had invested in the enterprise, and became Managing Agents in 1902 on the withdrawal of the Bombay interests. In 1911, they established the Kaleeswarar Mill in Coimbatore. Nattukottai Chettiars had also taken over the Koilpatti Mills which had started in 1892 and become bankrupt in 1908. Renamed as the Sri Chidambara Vinayagar Mills, this restarted in 1910. Interestingly enough, the initial venture, floated by traders from the Muslim Rowther community had been supported by Hyderabadi business interests. Both this and the earlier Calicut example show a willingness of Indian capital to move across political boundaries inspite of an absence of a stock exchange, or other forms of organised capital market.

Published historical material does not seem as yet to have proceeded beyond detailing the initiation of ventures in the textile industry by Indian capital in the pre World War I period. Ventures are said to have failed because of the lack of capital. It is not clear whether this was a lack of long term capital for

financing fixed investment, or of working capital. It is significant that European export-import houses dominated the cotton trade, so supplies of cotton were difficult for Indians to procure on a reliable basis, given that this would increase competition in spinning. These uncertainties may underlie the reason why the Coimbatore Mills, established in 1902 by Indian capital, passed into the hands of the Stanes group within two years.

There were also early ventures in sugar, paper and jute (Mahadevan, 1984). The Petai Suger Refining Company at Tachanalloor was established in 1895, by the Rowther merchants who had set up the Koilpatti Mills. Just before the war, it was transferred to its major financier who raised the paid up capital of Rs.3 lakhs entirely from his own resources. In the paddy producing Andhra region, large agricultural interests set up the Krishna Jute and Cotton Mills and the Guntur Cotton and Jute Mills, both dealing only with jute, in 1904. Indian capital from Madras Presidency was also associated with the Lakshmi Paper Mills at Punulur in Travancore, in 1909. There were some other ventures of note, such as the takeover of the Arbuthnot agency in Madras by Indian capital and Binny's takeover of the Bangalore Woollen, Cotton and Silk Mills.[6] Three textile mills were also reported in existence in Hyderabad.[7]

Handloom weaving of cotton fabrics was, of course, the major household industry of the entire late colonial period. Although it existed all over the country, it had a specific importance in

the economy of Madras Presidency (and in Hyderabad), and it is with reference to these two areas that the discussion takes place.

In the central districts of the Madras Presidency in the 1880s, two kinds of cloth for men formed the predominent item of production (Madras, 1909). The first was a plain bordered white cloth, possibly with end bands of cotton, while the second was a higher quality cloth with embroidered silk borders and end bands of silk or silver lace. While the simpler cloth had already been largely superseded by English long cloth which was said to cost half as much, the better quality cloth was extensively manufactured in Madurai and Salem districts. However, the introduction of machine made cloth with borders was beginning to pose a challenge to this latter variety. Machine spun cotton was used almost universally in these districts except for the coarsest varieties of cloth. Production of handloom fabrics for women had been less affected by competition at this time.

In the cotton producing districts of the Telugu parts of the Presidency, production to individual order was largely practised. Cotton continued to be spun by hand by peasant women, and woven by men, and was usually exchanged for grain. This cloth seemed to have survived the competition of European machine-made cloth because of its distinctive nature. It was more expensive to produce, but was warmer and more durable and was worn by both men and women amongst the peasantry. However the bulk of the weavers here, too, worked on imported yarn, though for the production of muslin both imported yarn and a specialised hand yarn was used.

For this last item consumers were willing to pay upto Rs.15 when handloom muslin was available for half the price.

There was a substantial trade in coloured cloth - dhoties and handkerchiefs in particular - between these districts and Hyderabad State, concentrated in the hands of merchants. However weavers producing items for this trade continued to work on their own account when there were no orders.

In the other Telugu districts of the Rayalseema area - Cuddapah, Kurnool, Bellary and Anantapur, hand spinning was a less regular operation though still undertaken when necessary for the production of coarse cloth for the peasantry. Coloured cloth for women was made of imported coloured yarn in these districts.

Some information is available for Malabar on the West Coast and for Coimbatore in the South. In both, coarse white cloth worn by the peasantry was woven, while some concentration of production was already apparent in Coimbatore town where 500 families were producing superior kinds of white cloth.

Despite the presence of the handweaving industry in almost all the districts, the condition of the weavers was steadily deteriorating in the later part of the nineteenth century. The margins they gained were low and in one instance in the districts of coastal Andhra, almost 25 per cent of the households had dropped out of weaving in the preceding four to five years leading upto 1880. The beginnings of wage work were discernible with unmarried men "waging for hire" within their family or

trade. This decline in the conditions in the handloom industry, although substantially exacerbated by the criminal mismanagement of the famine conditions in the late 1870s, was largely a result of the increasing competition of foreign textile imports. In the absence of a state policy during the entire colonial period, integrating technological improvements in the industry, with both tariff protection and inducements to large capital investments, the handloom industry's fortunes developed in response to policy measures taken for quite other purposes, as described below.

The pre-requisite for the survival of the industry lay in the possibility of large scale trade, if not manufacture, of handloom products. This, in turn, meant that merchant capital should identify a sustained demand for handloom cloth and also be in a position to change the direction of trade in cloth from one where imported cloth moved from major ports to the chief consumption centres, to one where indigenous cloth moved from prominent centres of production to these sales centres. In other words, competition between handloom cloth and foreign cloth depended not only on the relative cost of production of each, but also on the ability of traders to influence the patterns of wholesale trade.

It is by now well accepted that from 1896, when imposition of import duties on foreign cloth were matched by excise duties on Indian mill made cloth, the outlook for the handloom industry changed and improved sustantially, at least upto the 1920s (India, 1942, p.9). What is less well recognised is that this process was accompanied by the increasing subordination of the

weavers to individual wholesale merchants or, at least, to the requirements of wholesale trade (Roy, 1987).

This process accelerated during the First World War, when shortage of yarn and high prices drove many of the remaining independent weavers into the fold of mahajan and master - weaver run establishments. Ironically, it was precisely this development which enabled the handloom industry to become influential enough to gain, to a certain extent, the support of the Madras Government when its later period of distress began in the middle 1920s.

However, the outstanding feature of the period from 1880 to the first world war was the development of the incipient rivalry between British and Indian capital in the textile industry in Madras (as opposed to the normal competition between owners of individual firms). This was to reach its culmination with the greater assertiveness of Indian intermediaries and their transformation into industrial capitalists in the late 1920s and early 1930s (R.K.Ray, 1988). Although there were other forms of conflict, to be described later, in South India, this was to be the paramount one upto independence. Its centre lay in Madras and it is this, apart from its size, population and general economic importance that entitles the Presidency to detailed treatment in this paper.

V

Industrial Development during World War I : The Mysore example

The period from the immediate prewar years to the early 1920s had contradictory effects on the pattern and pace of industrial development. While imports were reduced, those included not only consumer goods but also, and more severely, capital goods and essential raw materials. Although munitions-led demand rose and foreign consumer items were scarce, South Indian industry was not able to expand in a way as to increase its capacity on a permanent basis; in fact it was not always able to meet the war led demand. Local supplies of raw cotton increased significantly, but war time controls ensured that much of it went to the mills such as Binnys, which had a large weaving department, and met the army's requirements.

Although the Indian Munitions Board was set up as a Department of the Government of India in 1917, its jurisdiction was not extended to the princely states until May 1918 (Indian Munitions Board, 1919). Controllers of Munitions were appointed in Travencore, Hyderabad, Mysore and significantly, in Pudukottai, but little impulse was given by the war to the development of industry in these states. What was remarkable, however, was the apparent change in official attitudes towards the role of the state administration in developing industry. The most spectacular change come in Mysore, but there were significant advances in Hyderabad, and in Madras, a refurbished Department of Industries was started in 1914.

In Mysore, partly as a result of the growing assertion of business interests in the State, and also due to the increasing influences of the national movement, the State administration had modified its position in favour of greater involvement of Mysoreans in industrial development, and economic growth in general (Hettne, 1978). This was signified by the alteration in the terms of the Treaty governing Mysore's relationship with the Government of India, negotiated by Visvesvaraya as Dewan in 1913. This, in concrete terms, gave noticably less grounds for the Resident representative of the Government of India to oppose plans for economic development. With this authority, the Mysore administration initiated a series of projects which were remarkable in their scale: the Krishnaraja Sagar or Cauvery Reservoir Project to be used for irrigation and power generation, and the Mysore Iron Works at Bhadravati. These irrigation and power works stand out for their size, and for the fact that electricity was to be generated not only for an identified consumer (as in the case of the earlier Sivasamudram Power Project which was linked to the Kolar Gold Mines) but was also to be made available as an inducement for further industrial ventures. The iron works were remarkable in that a specific technology utilising charcoal was to be used, ensuring that the absence in South India of coking coal did not prove to be an insuperable barrier to the utilisation of iron ore. It is significant that although Visveswaraya resigned from the Dewanship in 1918, and there was some slideback until 1926, the intensive industrialisation thrust continued throughout the

1930s, though with greater scope for the direct participation of private capital in the later period.

Simultaneously with these ambiticus ventures, Chatterton who had moved to Mysore as the first Director of Industries, led the team which established the Sandal Wood Oil Factory and the Mysore Soap Factory. While Mysore had traditionally exported sandal wood, largely to Germany where the oil was extracted, the war had disrupted this market. Experiments in wood distillation were undertaken at the Indian Institute of Science in Bangalore and as the results were satisfactory, it was decided to set up a pilot plant. This was constructed entirely by backyard methods, a large steam boiler was obtained from an abandoned gold mine, the Madras based Indian Aluminium Company made the copper stills, while the Bangalore Water Supply Division supplied a number of wood-breaking machines. Apart from the period of the immediate postwar depression and the great depression of the 1930s, the factory progressed well and supplied sandal wood for soaps, perfumes and medicinal purposes. Similar drive was shown in the case of soap. The foreman of the PWD workshop was sent to the Madras Government run Kerala Soap Institute at Calicut to learn about soap manufacture, and on his return the workshop manufactured the soap plant. It also made paddy separators, centrifugal pumps, sugar cane mills and agricultural components of various kinds.

In Hyderabad, the actions undertaken during this period were less ambitious (Subba Rao, 1988). The Inspectorate of Factories

and Boilers was established in 1910, and a Companies Act passed in the same year. More significantly, an industrial laboratory started work in 1917, and in 1919 a Department of Commerce and Industries was set up, probably as a result of the delayed transmission of war time demands by the Indian Munitions Board, as mentioned earlier.

In Travencore, too, the role of the State administration was very limited until the 1930s, although a Department of Industries was established in 1919, followed by the Travencore Economic Development Board (Issac and Tharakan, 1986). Laboratory experiments, scholarships and geological surveys appeared to be its major activities.

Thus by the beginning of the 1920s, South India's economy had been affected by the large scale growth of agricultural commodity production. This had led to the growth of agroprocessing industry including cotton gins and presses, rice mills and groundnut decorticating units. However the capital which had been accumulated was also being invested in larger scale undertakings, in cotton textiles in particular. If Indian capital was "shy" this would not have characterised the behaviour of the large capitalists who generally floated the company (India, 1918). Capital contributions were slow to arrive from small investors who, in the aggregate, both today and in the past, contribute a substantial amount of the centralised capital. The absence of a stock exchange or underwriting facilities made the risks to small investors unacceptably great. In the absence of large scale involvement of such a class of investors on the

other hand, there was little political compulsion on the government to reform the institutions by which these capital contributions were raised. These compulsions would usually become overwhelming when the collapse of an enterprise led to the loss of savings by the numerically large class of small investors.

IV

Industry in the Inter-war Period (i) - Madras

With the growth of substantial accumulations of capital by the 1920s, with the growth of official agencies concentrating on industrial development activities, and with the proven willingness of Indian industrialists to expand their areas of operations, the period following the World War could reasonably be expected to show a marked increase in industrial investment. This did not happen, however, until the introduction of tariff protection for the major industries, textiles and sugar, and the development of hydro-electric power which made the establishment of a newer generation of chemical-based industries feasible.[8]

In Madras, governed by the 1919 constitution, a partly elected legislative council was formed with Ministers who, although appointed by the Governor, were formally responsible to the legislature. One of the earliest State Aid to Industries Acts was passed in Madras and during the first years of the Ministries, it appeared as if industrial development would

finally be supported by the administration in an active way. However it soon became clear that though the forms of direct colonial control might have been loosened, the fiscal policy pursued by the Government of India, and the implications of this for the provincial Governments, precluded any significant thrust (Tyabji, 1988). However, one important, difference was that the greater degree of public accountability made more detailed information collection necessary. It is therefore possible to follow developments in the area on a somewhat wider canvas, though the information remains largely descriptive.[9]

<u>Cotton Textiles:</u> There were 43 cotton textile units in the Presidency whose operations covered the whole of, or part of, the period from 1920-37.[10] Twenty of the enterprises were based in Coimbatore which emerged as the major centre for Indian capital not only in Madras Presidency, but in the whole of South India. Except for the West coast and the Telugu speaking areas, British Managing Agencies were prominent in the industry in the Presidency.

As many as sixteen of the Coimbatore units were started between 1931-32 and 1935-36, this being the burst in depression induced investment in the industry (Baker, 1984, p.353). This capital now embodied not only the surpluses from banking operations by the Chettiars, but also the agricultural surpluses held by prosperious agrarian sections in and around the cotton growing areas of Coimbatore - principally from the Nayadu community (cf.Ray,1988). This was to have significant implications future of the industry, for the semi-feudal consciousness of many

of these industrialists, carried over from their agrarian milieu was to noticeably affect their conduct of industrial relations (Murphy, 1981).

During the period only three ventures out of those that had reached an operational stage failed. These were all unincorporated concerns which ceased working during the depressions of 1924-26 and 1929-32. Eight other proprietory concerns survived the period, while three others were successfully converted into joint stock companies. The industry had evidently by this time succeeded in generating confidence amongst the investing sections, although many firms continued to remain closely held by their promoters.

By far the two most significant features of the capital structure of the firms were the almost total absence of increases in paid-up capital over the period, on the one hand, and the wave of amalgamations amongst the British controlled mills on the other. This latter trend began with the merger of the Buckingham and the Carnatic Mills in 1920, the major amalgamation of the Pandyan Mills at Madurai, and the Tinnevelly and Coral mills in Trichinopally, with the Madura mills in the period 1924-29; and that of the Coimbatore Mall Mills and the Coimbatore Spinning and Weaving Company in 1930. Although the long term rationale for these amalgamations is not yet clear, for they considerably predate the growth of Indian capital in the industry, and competition is usually the spur to mergers, there is little doubt that the increased size of these firms would have given their

controllers considerably greater pre-emptive financial and political standing.

The textile industry in Madras concentrated on spinning. Although by the 1930s the base for weaving was strengthened, the most striking feature of the changes in the industry is the steady rise of the number of spindles. Apart from 3 of the mills which concentrated on weaving throughout the period, there was a generalised increase in the number of spindles in all the 40 other mills. The increase in the spindles when compared to the largely static nature of the paid-up capital implies that increasing recourse was made to borrowed funds, or to reserves, in order to finance the fixed capital.

With the exception of the post war depression year of 1923-24, and the two year period from 1933-34 to 1934-35, there was a steady increase in yarn production. A decrease in the proportion of the lowest counts, 1-10s, was matched by a rise in the higher counts, especially 31-40s. These changes would imply changes in the kinds of cotton used, and also in spinning technology.

18 of the 43 mills undertook weaving for some part of the period. These were in Madras city, Malabar, coastal Andhra, and Coimbatore. However, the size of the Binnys mills in Madras made this the major mill-weaving centre, for either of the two mills alone had looms which compared in number to all the other textile centres combined. Unlike in the case of spindles, the number of looms did not increase appreciably, with one exception, beyond the figure reached in 1926-27. The increase in the production of

cloth was also less spectaculer than that of yarn, it having roughly doubled over the period. Increase in weaving capacity was relatively greater in the 1920s than in the 1930s, unlike the situation in spinning. The relative advantages of investment in spindles and looms may have changed as a result of tariff protection policy starting with the 1927 Tariff Board Report.

In the absence of a census of production, the figures of average daily employment are the only source of data on the intensity of operation of the mills, or of the output. It is not possible, of course, with this measure to separate the effect on employment of an increase in capacity utilisation from that due to an actual increase in the machine stock. However, for present purposes, the actual reasons for greater employment are less relevant than the fact of variation in employment levels. It is, of course, assumed here that the process of automation was not such as to lead to a trend decrease in employment when production was static, or even when it was growing.

Given these provisions, the charts appended show for the composite and the purely spinning mills separately, the employment index for the years 1920 - 1935. The employment index is the ratio of employment in a given year to that in 1935. In the case of both types of mills, all those that were in operation over the greater part of the period have been considered. Of the composite mills, 6 of the 15 are in this category (Chart 1) and they were all in operation for at least 10 years at the beginning of the period. Of these 6 mills two, numbers 7 (Kaleeswara) and 31 (Madras United) were Indian owned;

3 mills, numbers 4 (Coimbatore Spinning and Weaving), 29 (Buckingham) and 30 (Carnatic) were British owned, while number 34 (Loyal Mills at Koilpatti) was bought by the Sassoon group in 1929 from an Indian managing agency.

There are three significant features of the chart. The first in the steady rise in employment of the two Indian mills (numbers 7 and 31). The second is the static nature of employment in the Buckingham and Carnatic Mills (numbers 29 and 30) and also that of the Coimbatore Spinning and Weaving Company (number 4) at about half its 1935 employment level until the dramatic rise in 1934-1935. The figures for this mill show the effects of the sale of the Coimbatore Mall Mills in 1933 with which it had been merged in 1930. The uncertain fortunes of the Koilpatti Loyal Mills, until its sale to Europeans in 1929 (number 34) is also apparent, although it is to be noted that even in 1935 it had not reached its 1920 peak.

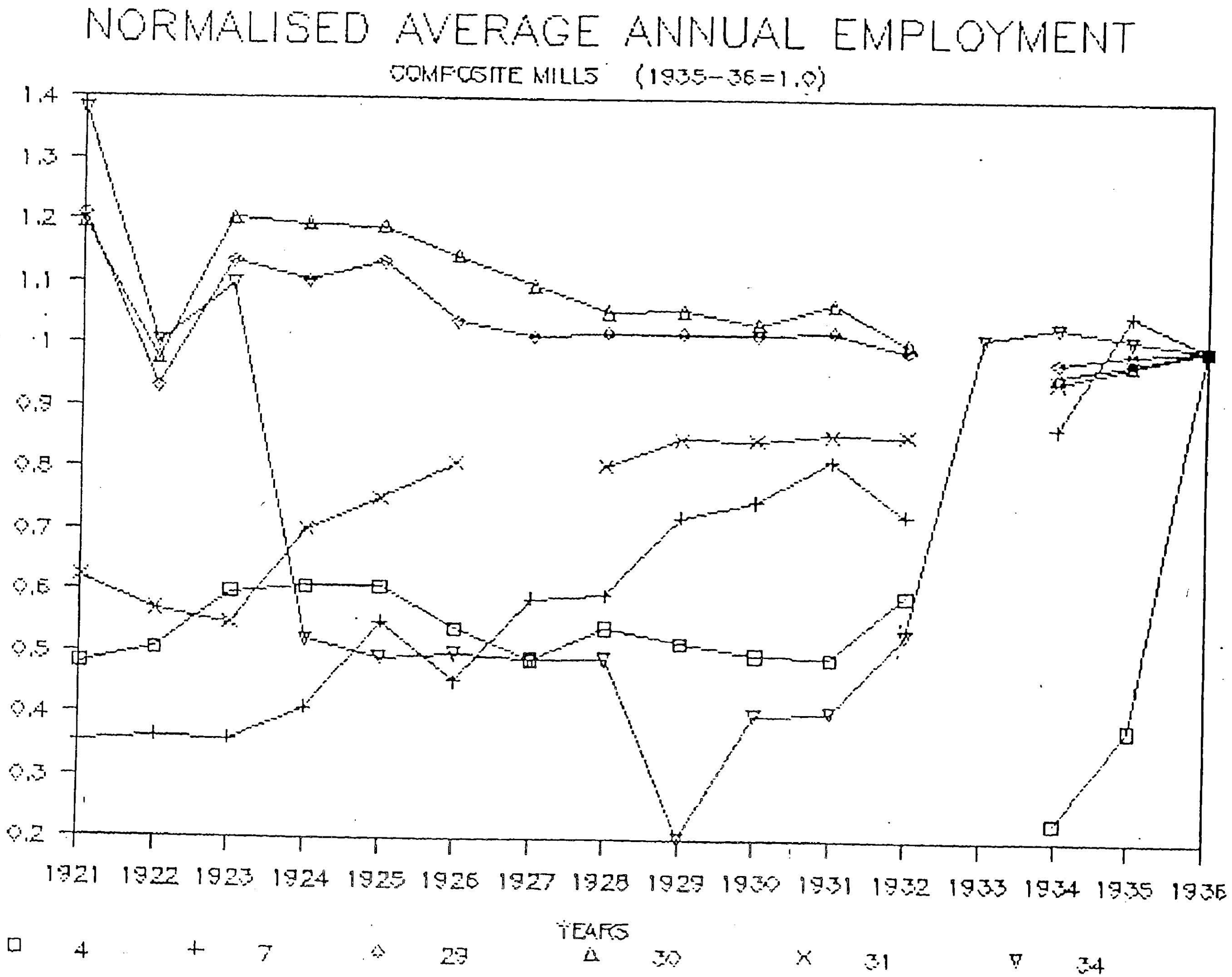
The point to be noted from the chart is that while the European firms fluctuated around the level of activity that they had already achieved by 1920, the two firms that were in Indian hands seemed to be steadily increasing in output if not in labour productivity. Although these were small mills both in number of looms and spindles compared to the Buckingham and Carnatic Mills, they were comparable to the other two European owned or taken-over mills. This seems to suggest that the Indian Mills were capable of systematically extending their market even before tariff protection brought in an import substitution phase.

The spinning mills have a noticeably greater degree of unstableness in their operation. In this case there are 7 mills that cover the bulk of the period, and of these, Radhakrishna Mills (number 13), Sri Ranga Vilas Spinning and Weaving Mills (number 18), Sri Suryanarayana Spinning and Weaving Mill (Number 38) and Malabar Spinning and Weaving Company (number 42) were Indian (Chart 2). The other three, Madura Mills (number 21), Coral Mills (number 32) and Tinnevelly Mills (number 33) were all managed by the A. and F. Harvey group (Chart 3). Comparison amongst the spinning mills needs to take account of the fact that the first three of the Indian mills were registered in 1922, 1923, and 1915 respectively and began operation in the succeeding years. They would not therefore have overcome their teething problems until sometime further into the period under consideration. Although the British mills (and the Malabar Mill) were all established in the 1890s, the figures for Madura Mills includes that for the Pandyan Mills, established in 1922, and taken over by Harveys in 1928. The advantages of common management and from 1929, a common holding company - all the mills were after this date units of the Madura Mills - would have made for marketing and financial power. Notwithstanding these disadvantages, Chart 2 shows that the two Indian mills based in Coimbatore (numbers 13 and 18) show a reasonably consistent upward trend. It is the Mill in Malabar, and the Sri Suryanarayana Mill in coastal Andhra (numbers 42 and 38) which show very wide fluctuations in activity on a year-to-year basis.

Further more, the fluctuations seem to take place around a central point and neither of the mills appears to grow.

Based on the evidence of the Bombay and Coimbatore Textile Labour Enquiry Committees, it seems that in the textile mills there was a fairly sharp division between the functions performed by men, and by women and children (Bombay, 1953; Madras, 1937). As is the practice in such situations, the strategy of industrialists is to separate the job components requiring less skill and, utilising the lower socially determined wage expectations of women and children, to employ them in such work. It is significant that Chart 4 which displays the ratio of female and child workers to total workers shows a clear distinction in their ratios between the mills based in Madras (numbers 29, 30, 31) and the ones based in Coimbatore (numbers 4 and 7) and Koilpatti (number 34). Women and children were certainly more widely used in spinning - as Charts 5 and 6 show, the proportion of such workers was much higher in those mills which were confined to spinning. It is also true that the ratio of looms to spindles was lower outside Madras i.e. that the mills in Madras were more weaving-intensive. However, it also seems likely that the Coimbatore Mills, located in what were semiurban areas, at best, were not only able to recruit workers at lower rates than in Madras, but were also considerably more able to deny permanency of employment (Madras, 1937). In such a case, labour intensive methods of work organisation which would reduce investment in fixed capital could be utilised, and the persons affected by intermittent work would usually be women and children

CHART 1



Note: I am grateful to George Mathew, Sharmila Barathan & V.Sathyasri for their help in the preparation of these charts.

CHART 2

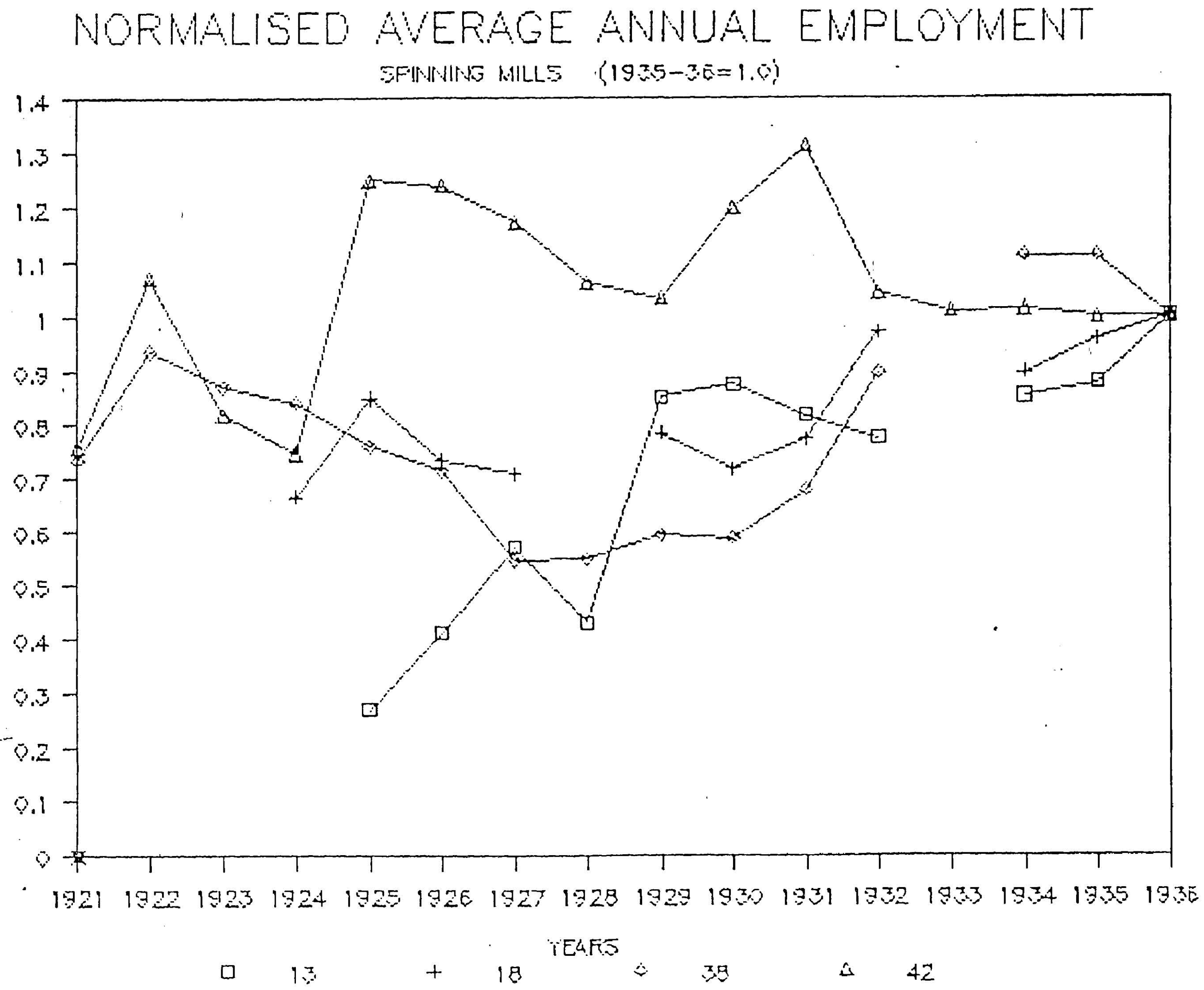

NORMALISED AVERAGE ANNUAL EMPLOYMENT
SPINNING MILLS (1935-36=1.0)
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936
YEARS
□ 13
+ 18
◇ 38
△ 42

CHART 3

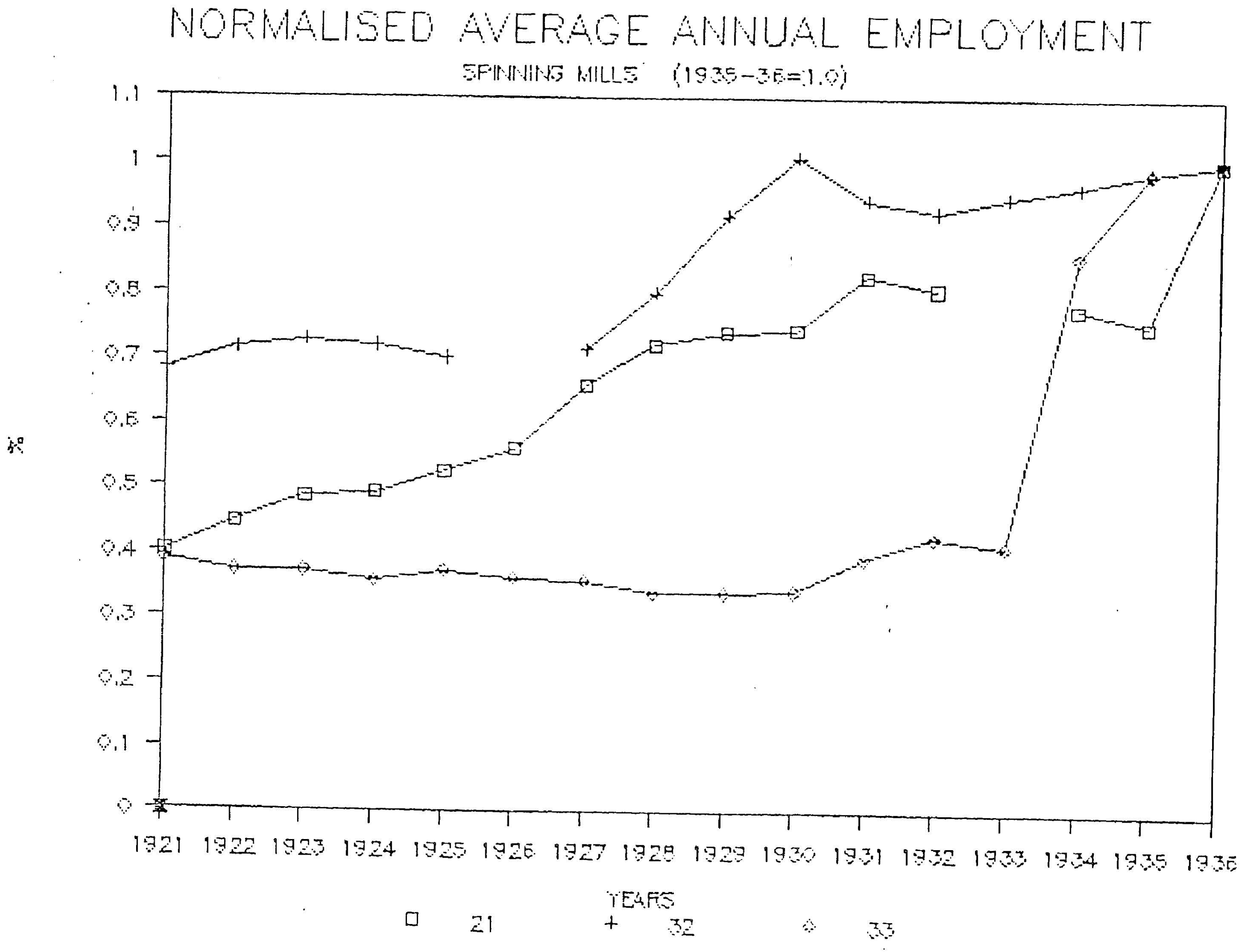

NORMALISED AVERAGE ANNUAL EMPLOYMENT
SPINNING MILLS (1935-36=1.0)
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
YEARS
21
32
33

CHART 4

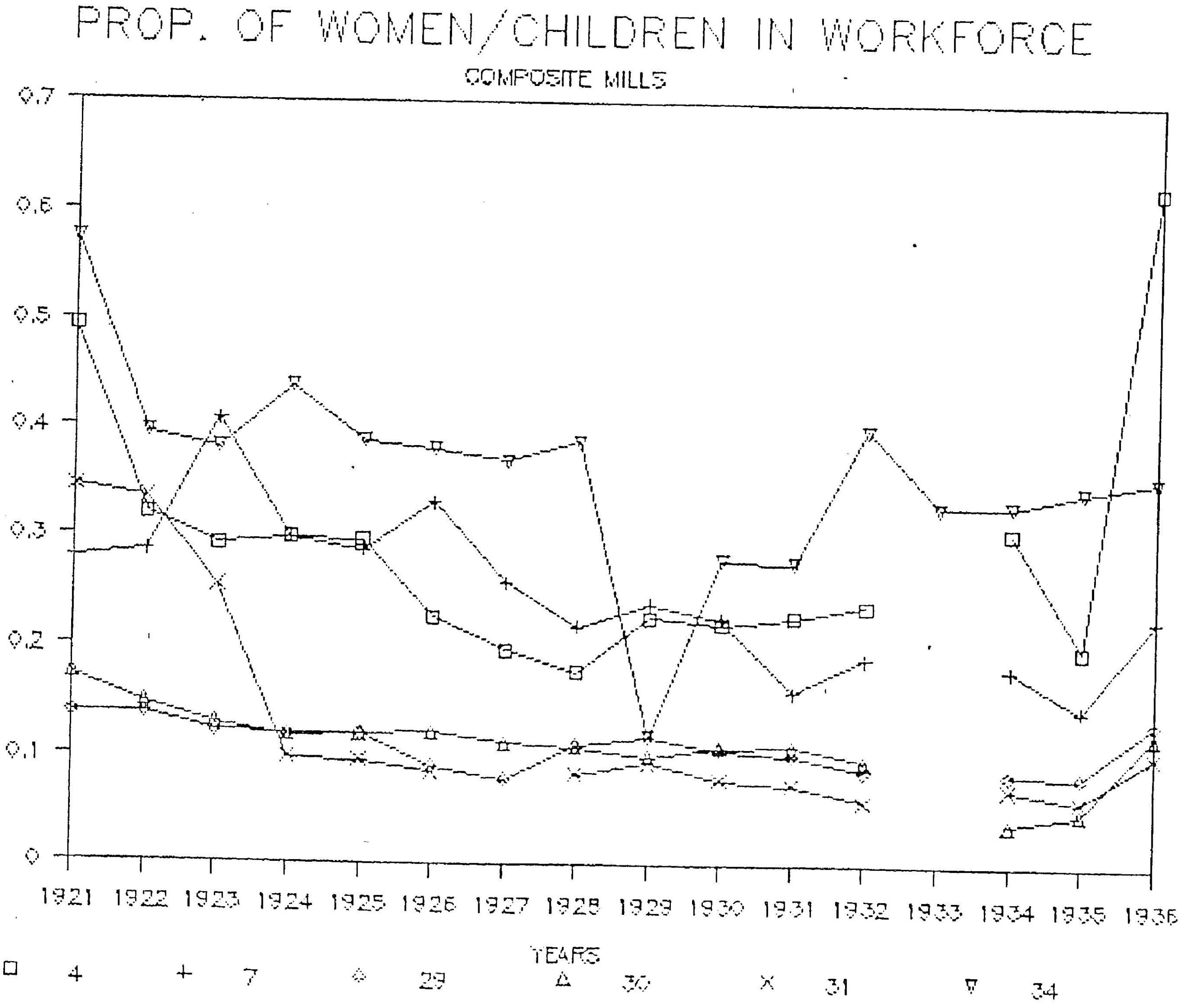

PROP. OF WOMEN/CHILDREN IN WORKFORCE
COMPOSITE MILLS
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
YEARS
4
7
29
30
31
34

CHART 5

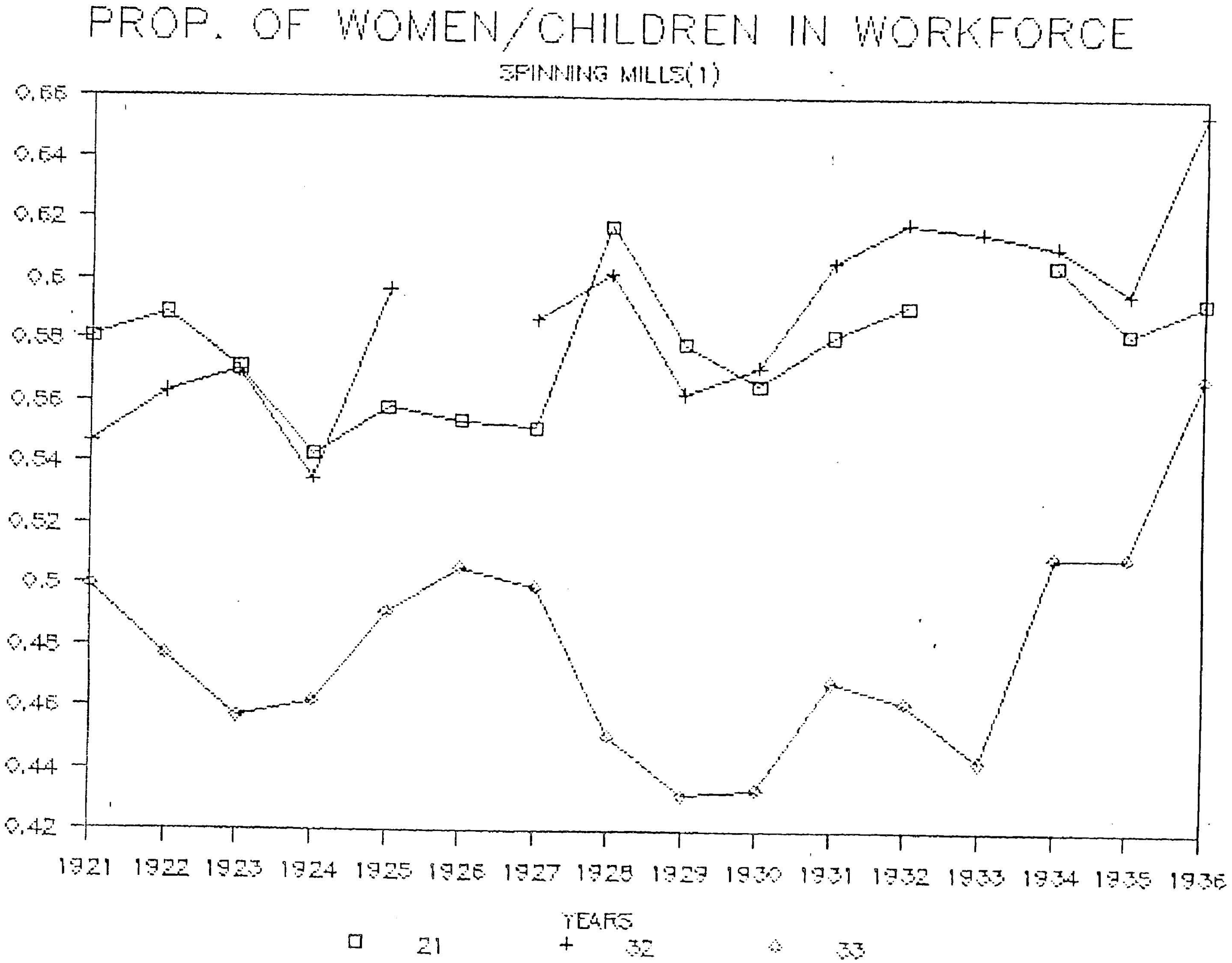
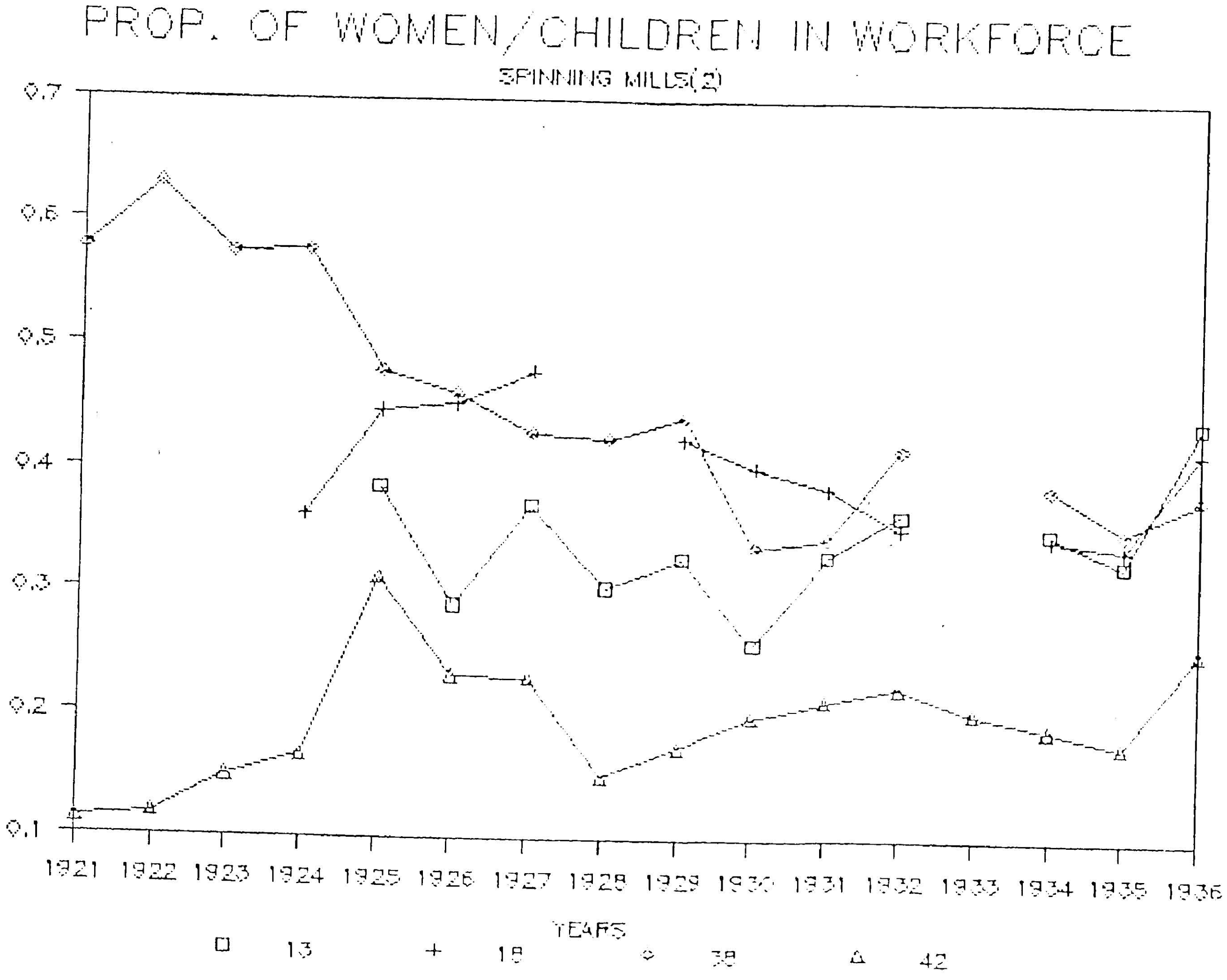

PROP. OF WOMEN/CHILDREN IN WORKFORCE
SPINNING MILLS(1)
0.66
0.64
0.62
0.6
0.58
0.56
0.54
0.52
0.5
0.48
0.46
0.44
0.42
1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936
YEARS
21
32
33

CHART 6


PROP. OF WOMEN/CHILDREN IN WORKFORCE
SPINNING MILLS(2)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936
YEARS
13
18
38
42

as it is usually these workers who are socially conditioned to accept work of an unstable nature.

In the case of the spinning mills, there is a tendency towards convergence to four trends by the early 1930s. As the charts show, these were represented by mill numbers 21 and 32; 33; 13, 18 and 38; and 42. These represent, firstly, the Madura and Coral Mills (both under A. and F. Harvey Management); Secondly, Tinnevelly Mills (also A. and F. Harvey); thirdly, Radhakrishna Mills, Sri Ranga Vilas Mills and Sri Suryanarayana Mills; and finally, the Malabar Spinning and Weaving Company. The British spinning mills used a noticeably larger proportion of women (between 50 and 60 per cent) as compared to about 35 per cent in the Indian Mills, and as little as 20 per cent in the Malabar Mill. The Madura Mill employed workers who had been listed under the Criminal Tribes Act and confined to a resettlement colony near the mill. Under this Act, the entire family could be made to work at a specified place. At a later stage, Harveys also established a small workers housing colony in Madurai where workers could, through a system of hire purchase, become owners of their house. One of the provisions entitling a worker to a house was that at least two members of the family should be working in the mill (Bhogendranath, 1957, p.235). It is possible that through such methods Harveys induced whole families to work at the mill, thereby enabling them to subdivide the work processes and reduce aggregate wage costs.[11]

In general, the Indian textile industry in Madras grew rapidly in the 1920s and 1930s, particularly in Coimbatore. However, the technical conditions in the mills there remained low. Partly this was a result of the low degree of evolution of a specifically industrial social consciousness amongst the industrialists, and partly the result of the objective conditions of extreme competition. Success was achieved by cutting corners, by lowering overheads through replacing mechanised processes by manual ones and concurrently, keeping the workforce on a semi-permanent basis, at best. However, whatever the technical and organisational basis on which the Coimbatore industry expanded, its very presence enabled it to grow in the next and final phase of pre-independence industrial development.

Jute The industry was concentrated in the coastal paddy surplus areas of Andhra where four large mills operated during the period. Although located close to the local sources of jute, the industry preferred to work with the Bengal variety which was said to be better in quality. This was inspite of the fact that the Bengal raw jute contained a certain amount of moisture which led to a small loss on drying. Reduction in freight rates on jute from Bengal had given the industry a favourable chance and upto the depression, it functioned well with steady increase in the number of looms and spindles employed. In between 1931 and 1933, the industry went through a major depression with one of the mills going out of commission. With a local market, the mills were able to recover by 1934, partly because the price of raw jute was very low. However with the rise in price of the raw

material in 1935, margins were cut as there was no corresponding increase in finished goods prices. In 1936, two of the mills stopped operating but inspite of prices being lower in the second half of the year, there was further addition to capacity. In 1937 there was again an improvement in the industry though all mills did not work. The Calcutta strike led to a rise in prices of finished goods during the year, and stocks both at the mills and at consuming centres were reduced.

Chemicals The major demand for heavy chemicals in the Presidency came from the textile, tanning, soap and match industries. Throughout the period, there was only one unit run by Parry's at Ranipet, near Madras city, making Sulphuric acid. The demand for chemicals is an important index of the development of the industrial base and in these terms, Madras Presidency did not progress very far.

The imported chemicals were used mainly in the soap and match industries, and for dyeing in the textile industry. Until the Tariff Board reported and the Heavy Chemical Industry Act was passed in 1931, competition from Europe and Japan was such as to leave little scope for indigenous manufacture. High railway freights to consuming centres in other parts of India also limited the growth of the South Indian chemical industry. The world economic depression affected imports, measured in terms of value at current prices, only in 1930 and 1931, all other years showing an increase over the previous years. However, inspite of

the protective tariff, the local chemical industry was affected by the depression and extreme competition from 1933 onwards. Low rates of freight on imports served to nullify the protective effect of the tariff. Thus in 1933, 1934 and 1935 demand remained steady, but prices fell in each successive year. This period also saw the growth in demand for chemicals used for dyeing, generated partly by the development of the household sector of this industry. In 1937, speculative purchase of dyes was reported.

<u>Sugar</u> Apart from gur and the indigenous method of white sugar manufacture, there were three types of factories engaged in the production of white sugar. The first worked solely with cane, the second with both cane and as refineries using gur, and the third wholly with gur. The refineries often had problems in getting palmyra jaggery and thus faced a shorter working period, although it was sometimes possible to import unrefined sugar at rates which made refining profitable. Until tariff protection particularly, the fortunes of the industry depended on the world prices of sugar. Added to this was the problem that the jaggery availability was less than that to be expected by the number of palmyra trees in the Presidency. This was due both to the shortage of tappers, as also the fact that jaggery itself went into final consumption. When the price of jaggery was high, the refineries could not get adequate amounts at a price that made refining profitable. In the late 1920s, the low prices of Java sugar led to increasing imports, which even the imposition of a higher duty did not curtail. With the depression, the prices

remained at a very low level.

There was a dramatic change after the Tariff Board's report and the imposition of protective duties. Production was at capacity in all the sugar factories, and seven new units were planned in 1934, of which six were in operation by 1935. In late 1935 the seventh began operations and two new factories were under construction. However by 1937, increased competition from North India led to falling prices, and the excess supply position was confirmed by the fact that a steep excise duty increase from Rs.26.25 to Rs.40 per ton was not reflected in the selling price. The palmyra industry was not in a position to bear the excise duty and there was concern at the implications of a contraction of the industry on the employment prospects of tappers. The rason for this was that the excise procedures were such as would require administrative expertise not generally available amongst palmyra tappers. This expertise was concentrated in a few hands, leading to the concentration of production, as in the match industry.

<u>Leather</u> The tanning industry was fairly widespread over the Telugu and Tamil districts of the Presidency. In the northern parts, tanning of hides was the rule while in the southern districts, it was skins that were mostly tanned. In Madras, Chingleput, North Arcot and Chittore both hides and skins were tanned. The majority of the tanneries were small units, only seven being of a size which necessitated their registration as

factories in 1927. In that year, exports of tanned leather amounted to 17 per cent of the export trade of the Presidency. Tanned cow hides, exported almost in their entirety to Britain, accounted for more than half of total leather exports by weight, and almost 30 per cent by value.

In addition to cow hides the exports included sheep and goat skins, buffalo hides and cow buffalo calf leather. Of all the industries in the Presidency, the tanning industry was the most closely linked to world market trends, as exports played an overwhelming role in the industry's demand pattern. Thus in 1928, with world wide liquidation of postwar excess stocks of cow hides, combined with a general shortage, tanned cow hide prices rose by 40 per cent and the tanners experienced a very good year. New methods of finishing lower grade goat skins also raised the demand for such skins, as the finish was almost of the same quality as that on higher grades.

Imports of wattle bark used for tanning over 90 per cent of the hides - though it was not used for skins - rose sharply in the late 1920s. The technique of using wattle bark also seems to have been grasped as there were fewer complaints of substandard quality. In 1929, exports reached the highest figure in both weight and value after the 1919-20 boom year. However, violent fluctuations in price led to losses in sales by tanners in some cases. The prospect of US tariff restrictions on leather imports brought home the fact that there was excess capacity in the industry, and sharp practices such as the adulteration of hides

with Epsom salts, to increase their weight and improve the colour became noticeable.

By 1930, the effects of the depression were felt, with extreme financial stringency on the London and New York money markets. With reduced demand from the United States under the new tariff regime, and with production in excess of British demand, large falls in price were to be expected. This was proven in 1931, when tanners lost considerable amounts and many had to renegotiate their financial commitments to their creditors. Madras tanners were by now almost the only buyers of raw hides and skins but severe competition among them led to some losses. By 1933 prices of raw hides had fallen to such an extent that railway freight rates were out of proportion, thereby raising relative costs unduly for the tanneries further away from the main raw leather market. In fact the low prices of the raw material, by which tanners could cover costs even at very low prices of the finished article, prevented the successful functioning of a cartel formed in June 1932. In January 1933 another meeting was held and a committee set up in Madras to persude tanners to limit production, which effort lasted for about 10 months. With the market entirely in Britain, increased purchasing power there by 1936 made conditions better for the industry and by 1937, with a large demand for the poorer quality hides, the industry's condition could be said to be "satisfactory".

<u>Aluminium ware</u> The production of aluminium-ware began during the early period of the active promotion of industry in Madras. The School of Arts began manufacture in response to army and expatriate European demand in 1898, and slowly further demand was generated by the establishment of workshops and agents in a number of places. The Indian Aluminium Company was set up by Europeans at Triplicane in Madras in 1900 to follow up on this work, and in 1903 it took over all the operations dealing with aluminium-ware, under the policy that commercially successful experiments should be handed over to private enterprise.

In the post World War I period, the industry expanded considerably with factories starting in Bombay, Calcutta and Benares. This caused a flooding of the market which, with foreign competition, led to the closure of some firms in Bombay. By the early 1930s, the price of aluminium had fallen so low that both brass and copper-ware utensils were being replaced by aluminium ones. However, the extreme competition created a situation where even with this expanded market, prices of aluminium-ware were very low, and covering costs of production was difficult. Foreign competitors were helped by the fact that import duties on both the raw material and on aluminium-ware was at the same level.

In Madras Presidency, aluminium vessels were also made in the household sector in Rajahmundry in Godavari and Vijayawada in the then Kistna district. In the former place, about 100 units employing 3-4 workmen existed, while in Vijayawada manufacture in

3 units was sufficient to meet local demand.

With the depression and the 1930s, the demand situation worsened further. An increase in production when dispcsable incomes were actually falling, led to a still further fall in prices, from a level where they were already uneconomical. Although imported aluminiumm prices were very low, there was little certainty about their remaining at this level and production increase under these conditions was problematical. Capacity utilisation was about 50%. In 1933, an attempt to form a cartel failed, and with a fall in brass and copper prices, there was a switch back to utensils made of these metals. This situation continued to 1936 when consumption was only 40% of the norm. In 1937, with the second and this time, successful formation of a cartel, prices role along with turnover, as the price of brass-ware also increased. Prospects for the industry were better than for many years previously.

<u>Soap</u> The Malabar District was both the largest producer and the largest consumer of soap in the Presidency. In other districts soap was made on a small scale but was said to be of a relatively low quality and unable to compete with imports. In Calicut, imitations of the brands produced by the Kerala Soap Institute, and of imported borax soaps made by the cold process, were manufactured. Production of milled toilet soaps had not started. The figures for the growing value of soap imports showed that demand was increasing and there was space for further expansion

of production. By 1929, a change over from the boiled process to the milled process for toilet soap had started in Calicut with orders placed for machinery. A cheap washing soap made in other parts of Malabar had an easy market. The industry in Thanjavur had expanded to a size equal to that of Malabar, but the quality was said to be inferior, while in the Telugu districts of the Presidency, soap manufacture had not spread beyond Chittoor. All the units in 1930 were making washing soaps as the Calicut unit had not started production.

Local manufacture of soap gained considerable impetus by the Swadeshi movement, which generated demand both for the cottage soaps made by the simple cold or semi boiled processes, and the modern methods used in the Madras units. By 1933, it was clear that the industry had been less affected by the depression than many others, and the Tata Oil Mills unit in Ernakulam both increased production of washing soap and started manufacture of toilet soap. Despite Japanese competition, production continued to increase with an accompanying growth in the number of small units. However, competition from large units located elsewhere in India forced some reduction in prices, although the quality of toilet soap had improved. By the end of the period, the price rise in coconut oil, which was the basis of the process used by the small units, was creating some difficulties.

Indian manufacturers largely depended upon tallow for the production of good toilet soap. The tallow made indigenously was of a low quality, and insufficient in quantity, and the entire

process of refining it was inefficient. Imported tallow from Australia, New Zealand and England was very expensive, placing Indian manufacturers at a disadvantage. Hydrogenation or hardening of indigenous oils would have served as a substitute for tallow, but until the advent of cheap electricity made economical production of hydrogen possible, this was not an option.

Oil Milling Most of the oil milled from groundnut, castor, coconut, cotton seed and gingelly in the Presidency was used in the home market, but a little was exported. The problem of expansion of the industry lay in the small size of the home market, as the alternative, large scale exports, were difficult to achieve (Tyabji, 1990). Packing and transporting oil was a complicated business, freight rates were high and tariffs in importing countries had to be overcome. The competition from Marseilles in foreign markets was particularly stiff.

The internal market for oilcakes was limited by the existing situation where publicity to demonstrate the advantages of oil cake for fertilizer and cattle-feed had not been undertaken. The transport costs to be incurred in approaching the central and concentrated markets was also often prohibitive. With the growth of ghee substitutes, the consumer demand for groundnut oil became unstable, as it did for the coconut oil industry on the West Coast. The economic exploitation of reserves of oil seeds in the Presidency required general industrial development, and with it, the growth of the soap and ghee sectors.

With the depression, both external and internal demand for oil fell, leading to the closure of some mills. Falling prices for the oils made substained operation of the mills very risky. The situation worsened still further with competition from Sri Lankan coconut oil and the imposition of an export duty on oilseeds from the Nizam's Hyderabad state. The establishment of a groundnut mill by a transnational firm which worked almost continuously throughout the day provides some evidence that the scale of operation of the indigenous mills was probably too small to allow for economies, particularly when a survey of village oil ghanis showed over 20 thousand to be in a working condition. Although these operated for only two to three month in the year, the internal market could not grow until the demand that the traditional ghanis catered to, was tapped. In turn, this could happen only when economies of scale allowed mechanised oil milling to compete with the household sector in the villages. With the lack of growth of the market, the oil industry was critically dependent on the economics of the relative prices of oil seeds and oil, and it was not until 1937 that the price of coconut oil increased substantially.

<u>Saw milling industry</u> The industry was concentrated largely in the western half of the Presidency, along the Malabar coast. It was in a depressed condition by the late 1920s, peculiarly subject as it was to the vagaries of the monsoon. In 1927, a partial failure led to a shorter than normal "floating season" with the result that there was a shortage of timber suitable for sawing. The adoption of steel railway sleepers by the Railway

companies removed a major source of market demand, and left the industry largely dependent on the Bombay and Karachi markets. The major market for timber from where the saw mills got their stocks was at Kallai. Increasing costs of extraction would raise the Kallai prices, and with the unwillingness of sawn timber buyers to accept higher prices, the profit margins were narrow.

With the depression, there was a simultaneous contraction in the Bombay and Karachi markets, in Arab trade with the Gulf countries, and in exports to Europe and America. In the years that followed, the severe cutback on expenditure on construction by the Public Works Department, Local bodies and the private sector had their impact on the saw milling industry. By the mid thirties, the smaller suppliers had been forced into cut-rate business and sleepers were available more cheaply than in the previous thirty years. However, the demand on this account kept the industry going. Demand from the continent grew unexpectedly, from France for rosewood and Malabar teak for special size sleepers, and from Germany, although here it was on a barter basis.

Hosiery Two kinds of hosiery goods were manufactured in the Presidency. The first was known as India gauze, and the second as network. Japanese competion, particularly in the cheaper grades was very strong in India gauze. Yarns of the right quality and variety were difficult to get at rates which were competitive. Extreme competition kept the profit margins low. However, inspite of these conditions, there was an increase in

the number of units at work in 1930, with several of them undertaking new investment in power driven machinery such as net banian machines, ribtop machines, French net machines and the Barfuss looms. In this industry, however, there was the prospect of political support from the Swadeshi movement, and inspite of Japanese competition, the industry functioned well. This was inspite of the system of sales, where competition forced manufacturers to forward goods, to be paid for when sold.

By 1933, competition was so great that tariff protection was asked for, and this when granted, led to a large increase in production though the profit margin remained small. The demand was, predictably, much greater for the cheaper goods where margins were very small. By the end of the period the situation of the industry was reasonable, particularly in the case of units on the West Coast.

<u>Tiles</u> This industry was concentrated in South Kanara, 32 of the 50 registered factories in 1927 being located there. With a further 15 in Malabar, it was the West Coast which was a major centre for the industry. The industry was affected by excess production, and the reduction in railway freight rates introduced in 1924 seemed to have little results for the industry in terms of increasing demand. While the units in Malabar were doing relatively better, the Mangalore units were tied to the Bombay market, and the effects of the trade depression there was felt even in 1928. Demand was generated in Colombo, Rangoon, and centres in South India, too, but some smaller units had to close down due to the competition.

Some units in Malabar actually installed new equipment and expanded capacity in 1929. Although slumps in the building trade in Colombo and Rangoon reduced demand, it increased in the South Indian centres. The South Kanara units were less favourably placed as strikes and other forms of political agitation curtailed business demand in Bombay. In 1930, the freight rates on tiles brought from the West to the East coast was raised, making business difficult for the West Coast firms, as rail transport was preferable to ship for easily breakable items. Some small units started operations in Coimbatore. The Straits Settlement markets were affected by competition of French tiles sent from Marseilles, while it was difficult to ship tiles from India to Singapore and Penang. The demand from industry which had been unsatisfactory was balanced by a revival of exports to Colombo and Rangoon in 1933, after a two year slump. On the other hand the low level of agricultural prices and low incomes curtailed domestic building programmes amongst the agriculturists in South India. In 1935 there was some improvement though there was now the prospect of Japanese competition. At the end of the period, both the Malabar and South Kanara industries suffered from over production, leading to price cutting and greater competition for shipping space. The Malabar industry continued, however, to do relatively better.

<u>Matches</u> With the increased duty on matches which was levied from 1922, a number of match units were established in the Presidency. Most of the units did not use power and operated on a comparatively small scale. The smaller firms obtained their

splints and veneers from major wood-working units in Malabar, and concentrated on the operations required to finish them into complete matches and match boxes. In general terms, it could be said that the technical difficulties in manufacture had not been satisfactorily overcome. In addition, although the units had local markets, there seemed to have been little impact overall on the demand for imported matches, until the establishment of the Swedish Western India Match Company (WIMCO) factory near Madras.

Secure supplies of suitable woods at a rate which would allow for economic manufacture was essential, and some units had to close down because insufficient attention was given to this aspect.

Although imports of foreign matches did decline before the WIMCO factory began to operate in 1929, this was compensated by arrivals from Bengal and Burma. It was, in fact, the growth of WIMCO which affected the market for all kinds of matches including that made by the small units. After the Tariff Board decided that special measures to help small scale production were not desirable, the prospects of competition became more severe. In fact, the competition was not equal, as WIMCO used imported raw materials including aspen wood for splints and veneers. By the early 1930s, the indigenous Malabar wood was becoming increasingly more difficult to obtain, and manufacturers were further handicapped by the 5% duty levied by the Municipal Corporation of Madras on imports, which WIMCO avoided by its location.

The depression had contradictory effects on the industry. While in general terms the demand contracted, production of the cheaper varieties grew. It was said in this connection that the earlier consumer prejudice against non-white splints had been overcome. With steady growth in specialised units, making splints and veneers, and in the cottage "dipping" units, competition between the mechanised and unmechanised sectors grew. In fact, until the introduction of excise duty on matches, the unmechanised sector grew in response to the demand for cheap matches. The excise duty had the effect of concentrating production, principally because the excise regulation requirements were such as to destroy home based producers - the requirements of book keeping and accountancy, apart from the working capital required to finance batch production, that excise inspections necessarily required, ensured this. Throughout the rest of the period, production capacity together with manufactures from other parts of India were well in excess of demand, and prices fell. Rising costs of chemicals by the late 1930s, combined with the excess supply, kept profit margins low.

<u>Cotton Handlooms</u> The concentration of merchant capital in the handloom industry with its characteristic form of operation, whereby the effects of market saturation could be passed directly onto the weavers, meant that the industry suffered from violent fluctuations (Baker, 1984, pp400-406). The amount that the peasantry had to spend on cloth depended critically on the levels of agricultural prices, while input costs were related to the price of specialised yarn items on the international market. The

local yarn also fluctuated depending on the demand generated in Bombay and elsewhere in the country. There were three results of these influences: firstly, a concentration on production of coarser goods made from Indian yarns, which process was accelerated by the imposition of duty on finer imported yarns; secondly a further process of concentration of merchant capital, so that by the 1940s about 40 firms controlled 1600 looms between them, accounting for Rs.20 lakhs turnover a year in Coimbatore. Four families controlled most of the business in Madurai while in Salem it was concentrated amongst 100 large firms; finally, this concentration expressed itself in larger putting-out networks, implying a reduction in the number of guild-like organisations of skilled workers.

The ease and rapidity of movement of capital into and out of the handloom industry, combined with the sheer extent of economic distress created by these movements, eventually forced the Government into taking a more active role in the management of the industry. This essentially meant ensuring the supply of yarn, and providing a well-defined market segment. These efforts had begun with the formation of an apex cooperative society in the mid-1930s, which was expected to nuture the growth of affiliating primary level cooperatives, and thus break the power of merchants and the instability that flowed from their operations. However, the cooperative society made little advance until its restructuring during the Second World War. Essentially, with the loss of both overseas markets, and those in other parts of India, there was little that could be done to

ensure continuity of work to the weavers, unless hard decisions were taken about allocating specific items exclusively for handlooms. Although demands for a "common production programme" were voiced from 1936 onwards, the government acted along these lines only in 1944.

VII

Industry in the Inter-war period (ii) -- the princely States

A. Mysore

In Mysore, the most significant developments in the inter-war period were in the promotion of the iron works, and during the 1930s, in a concerted attempt to involve private capital in a large range of enterprises (Baldwin, 1959, Hettne, 1978). Although Visvesvaraya's schemes for hydro-electric power and irrigation development had considerably improved the preconditions for the growth of capital accumulation in the agrarian sector, and provided a modern source of power, the iron works did not provide for the same order of immediate benefit to the proto-industrialists in the State. However, it was clear that this section was in favour of active state aid to private industry and the administration responded to this from 1926 onwards, when Mirza Ismail replaced the earlier Diwan, a member of the ICS whose political perspective seemed to model that of the administration of British India.

However, during this interim period the iron works were pushed through to completion in 1923. It is significant that the

project had been initiated without consultation with the Government of India, who intervened when the machinery had been ordered and insisted that the project should be cleared by them. The Tata Iron and Steel Company (TISCO), who had been appointed Managing Agents (presumably on the understanding that the project had obtained all the required clearances) became noticeably disinterested. It was ironic that once this situation was reached the issue became one of the general assertion of the rights of the Mysorean proto-capitalists to action independent of the wishes of the Government of India. The ICS led administration which succeeded Visveswaraya asked for his services in helping to complete the project, and this was achieved despite the indifference shown as far as specific support to it was concerned.

The project was a major entrepreneurial venture, because the absence of supplies of coking coal in South India made it necessary to use charcoal, and the economics of the entire project depended on the profitable sale of the by-products of wood distillation, which was to provide the charcoal (Srikantaiya, 1927, pp.97-102). According to the project report by an American metallurgist (who was also a consultant to TISCO) the higher quality of charcoal iron would have allowed for a higher price realisation than for coked pig iron. Unfortunately, developments in chemical engineering made available far more efficient methods of producing the chemicals which were to be the by-products of the distillation process; simultaneously, a sharp post-war fall in pig iron prices drastically reduced the

possibility of profitable sales of the iron. However, the government continued to support the iron works, and a series of ventures were commissioned so as to make the project viable.

In 1926, a German designed cast iron pipe mill began operation, which by the end of the decade, produced 20 per cent of Indian cast iron pipe manufacture. With the decline in Japanese imports of Mysore pig iron, a decision to establish a steel plant was taken in the early 1930s. Also German designed, this came into operation in 1934 with a capacity to roll small sections. By the late 1930s, horizontal expansion had taken place with the addition of a small cement plant using by-product slag from the blast furnace. This process also came up against unforseen technical problems. However, the determination shown in attempting to solve their problems made the Mysore Administration an exceptional one in the area of technological and industrial entrepreneurship.

By 1940, the Government of Mysore was the owner of 10 enterprises which excluding the iron and cement works, and the sandal wood and soap factories mentioned earlier, were the following: the Electric Factory, the Porcelain Factory, the Mysore Implements Factory, the Industrial and Testing Laboratory, the Silk Factory and the Lac and Paint works. In addition, the Government held shares in companies promoted by it in the fields of sugar, paper, spun-silk, tobacco, chemicals and fertilizers, stoneware pipes and potteries, edible oils, silk filatures, matches, tanning and coffee curing. The important general point about these Mysore firms is that there was active public

response to the share issues, even when the Government share holding was small, Capital contributions were therefore not difficult to attract in a situation such as Mysore's, where the administration had demonstrated its commitment to economic development.

It may also be noted that while in Madras Presidency, this period saw the maturing of the conflict between Indian and British capital, in Mysore there were several instances of conflict between large Indian capital and its smaller, regional variant. The most apparent was over the question of the market for pig iron. The major producers were TISCO in Bihar, the Iron and Steel Company in Bengal, and the Mysore Iron Works. Under an agreement signed in 1931, the market for pig iron in the Bombay Presidency (excluding Sind), Madras Presidency (upto Vijayawada), and Hyderabad State, and in all the enclosed princely states was allocated to the Mysore Iron Works, upto a maximum of 7000 tons a year. Sales above this amount, and sales in all other parts of India, were to be divided up between the North Indian firms. Similarly, in the case of cast iron pipes, the market was divided between the Bengal Iron Company and the Mysore Iron Works on a geographic basis (Indian Tariff Board, 1934).

Although TISCO had originally been the Managing Agents for the Mysore Iron Works, the agreement on market sharing was reached with great reluctance (Balakrishna, 1940). Significantly by 1937, the North Indian firms were selling iron in their monopoly markets near Bengal at Rs.60 per ton. In Madras, in

competition with the Mysore Works, inspite of rail freight their price was Rs.40 per ton (India, 1937, p.68). The effects of this competition would have considerably helped the small foundries in Madras, for this class of foundry had protested to the 1934 Tariff Board on the Iron and Steel Industry against discriminatory pricing of iron by the chief producers in North India (Indian Tariff Board, 1934).

The sericulture industry was old established in India and was carried out in Kashmir, Bengal and Assam, in addition to Mysore. The silk worms indigenous to both Kashmir and Mysore had been destroyed by the pebrine disease in the 1870s. Some revival took place in Mysore in 1890, but there was another decline, the industry reaching its lowest point in 1914-15. The subsequent revival of the Mysore industry took place after 1920 when a Department of Sericulture was established (Indian Tariff Board, 1933).

The industry had four distinct stages - silk worm rearing, cultivation of food plants for worms, reeling cocoons for raw silk, and preparing raw silk for weaving. These four stages were nowhere integrated except for silk worm rearers often undertaking the cultivation of the food plants. The stages were linked together by middlemen charging varying rates for commission and transport.

In Mysore the mulberry was predominantly grown on unirrigated land, and the leaf used by the cultivator to rear silkworms. Specialised rearers would buy seed cocoons and raise

the worms obtained from the seeds upto the stage of the first or second moult. They would at this stage be distributed to households for further rearing. The cocoons from which the silk was derived would be reeled either by households or in a few manufactories under Government or private auspices.

Silk yarn produced in Mysore was not exported outside South India, but used by handloom weavers in the South. However, the silk waste which was sent to Europe in large quantities after 1857 provided most of the income for the household reelers. The reelers would sell the silk through merchants in Bangalore. Buyers would get the silk either from these merchants, or from brokers, who were only five in number in the mid thirties. These brokers would merely arrange purchase on credit from the merchants who, if their own capital was insufficient, would borrow from shroffs or from joint stock banks.

The Department of Sericulture in Mysore, which was established after the post war rise in silk prices in 1920, was said to be the best equipped in the country. The Department provided services such as guaranteed disease free seed from both Government and aided grainages, evolution of better yielding cross breeds of silk worms, advice on improvements in local practices of mulberry culture, and in better methods of silkworm rearing. However, an attempt to improve reeling practices by the development of an improved domestic "basin" had not succeeded, probably because of the poverty of the household reelers.

Although Government aid was successful in increasing silk

production, the industry faced severe competition in the 1930s from China and Japan. Depreciation of the Chinese currency made imports much cheaper, affecting silk production both on a household basis and in the filatures (silk manufactories). Greater internal competition also occurred when Kashmir silk lost its European market, and the production there was reoriented to the home market. Correspondingly, imports of Japanese silk goods increased competition for the silk weavers, and reduced their ability to accomodate the demands of indigenous silk spinners. One effect of this was that while in the predepression days, a local household reeler could get an advance of 50 - 75% of the silk from the Bangalore merchant free of interest, after the depression 10-12% interest was charged. By the late thirties the interest rate had fallen to 8 - 10%, but was now combined with a commission of half an anna per pound of silk (Indian Tariff Board, 1940).

Although silk reeling was widely dispersed in the rural areas, the trade was highly concentrated in Bangalore city. An index of the importance of this trade to the economy of Mysore (and to the larger traders) is the fact that the sericulture industry was examined by the Tariff Board in 1933 and 1940, when the Mysore Government asked for tariff protection for the industry. It was through measures such as these that by 1945, Mysore produced half the total amount of Indian silk, nearly 5 times as much as Kashmir, which was the next largest centre of the Industry (India, 1945b).

B. Hyderabad

Policies in Hyderabad were, broadly speaking, similar to those of Mysore although there was a less determined effort to encourage industrialisation. However, budgetary funds were allocated for granting loans and investing in equity and debentures (Subba Rao, 1988). The institutional form by which this aid was given was of the Industrial Trust Fund (ITF), established in 1929, after some years of Departmental experimentation with "pioneer" enterprises. ITF served also as a Managing Agent, and therefore continued to have a stake in the firms that it promoted. The Industrial Laboratory and Osmania University undertook experiments in using local raw materials and were able to develop processes to manufacture power alcohol, soap, paper, methylated spirits and some oil - seed products. Other fiscal policies such as blanket tax exemption, duty free import of raw materials and duty free export of finished goods together with a purchase policy that favoured local manufactures were aimed at the diversification of the industrial structure. In both princely States local personnel were preferred and favoured.

However, it appears as if in Hyderabad there was little attempt to tap private sources of capital. The firms were essentially owned by the Government, although a small section of the hereditary senior bureaucracy, already favoured with grants to land, or local capitalists, became the agents or directors in most of such firms, acting on behalf of the ITF (Subba Rao, 1988;

Ramakrishna Reddy, 1987).

C. Travancore

In Travancore, on the other hand, significant large scale industrialisation beyond the phase of agro-processing began at the very end of the inter-war period, and the results of the industrial policy of the administration were felt in the 1940s (Das, 1979; Mahadevan, 1988). Interest, however, lies in this case in earlier developments in the coir and cashew industries (Issac, 1983; Kannan, 1981).

Although the coir weaving industry had been established in England in the 1820s, the first manufactory on the Malabar Coast was established in 1859 at Alleppey. In the course of the next fifty years, other firms were established along the coast. However exports, on which the industry depended, began to grow only around 1911-12, reached 30,000 quintals during the war and about 1,00,000 quintals during the 1920s.

The rise in exports was accompanied by increasing profits, for unit values of exports rose more than raw material or labour costs. Leading European mercantile firms either established new manufactories or took over existing ones, and they were accompanied by Indian merchants from Alleppey and sections of the prosperous farmers. However, the Indian ventures were

handicapped in their operations due to the greater control of the Europeans over markets, credit and discounting facilities, and better technology in dyeing and packaging of coir fabrics. Their main competitive asset lay in the cheapness of their products, due to lower overheads and a lower profit margin.

The issue of yarn exports entirely controlled by Europeans became controversial, for the baling capacity lay in their hands. In effect, this gave an advantage to the weaving industry based in Europe, which was protected against imports from Travencore by tariffs. Baleable coir yarn could be shipped at considerably lower cost than that at which coir fabrics could be exported. Powerloom weaving had been introduced in Europe while traditional handlooms were still used in India.

As late as 1945, coir spinning was said to be essentially a cottage industry undertaken on the traditional charkha, if not by hand (India, 1945 a). This yarn would be sold or even bartered to a small local shop keeper, who would pass it on to a dealer or middleman. At this stage, the yarn would be roughly sorted according to colour and thickness, and then sold again to another dealer at the coastal ports from where it would pass to the shipping firms or to the manufacturers. In the case of yarn exports, there would be a further re-sorting, rewinding and grading before it was baled hydraulically and then shipped.

As the coir weaving industry expanded, it localised itself to a greater and greater degree around Alleppey, largely due to the easy availability of coir yarn. In the 1920s and 1930s, the

expansion of the industry took place essentially though the growth of large scale manufactories in which there was a detailed division of labour. During the depression, the demand for cheap floor coverings increased in the west, and exports of coir fabrics also steadily increased. However, the export prices fell regularly until 1933-34, and even at the beginning of the Second World War, they were as much as 50 per cent below the prices ruling in the mid 1920s.

Of the 100 or so registered shippers of coir products in 1938, 4 leading European firms controlled 50 per cent of the exports. Another 15 or so urban manufacturer - shippers accounted for about 30-35 per cent of exports. Thus the remaining 80 shippers made up not more than 15-20 per cent of the exports, many of them undertaking exports sporadically, moving in and out of the business. The small scale of business did not allow them to appoint representatives in foreign countries. Markets could be obtained only by cutting prices, and this weakness was taken advantage of by importers who encouraged price cutting wars. This, in turn, led to a depression in the prices obtained by all the other shippers.

These small shippers based themselves on the supply of coir products from rural manufactories, which had been established in the 1930s. Although Alleppey continued to be the centre of large scale manufactories, 70 per cent of the mat looms and 45 per cent of the matting looms were located in the countryside between it and Shertallai. These were much smaller units, the average

loomage being 30 as opposed to 111 in the Alleppey manufactories.

Many of the rural manufactories started as feeder units to Alleppey shippers, providing coarser varieties of coir fabrics in a semi-finished condition to the shippers who finished, graded and packed them for export. A few of these rural manufacturers developed into shippers, and exporters also came from the ranks of the "factors" or merchant-shippers. Many of these had evolved from depot owners who mediated between the rural manufacturers and the urban manufacturers - shippers. Due to the rivalry between the Indian and European urban manufacturers, a common front could not be built up; and with the inability of the powerloom to compete with the rural handloom, the stage was set for increasing instability in the industry, with extreme competition threatening at a time when the demand was rapidly growing. It was in these conditions that the coir workers struggles developed to an extent where they became one of the major determinants of the future growth of the industry, and of the forms of production organisation common within it (Issac, 1983).

Although the cashew industry involves processes which are simple, and it is often thought of as a traditional industry, its origins are fairly recent. From the beginning of the century firms such as Pierce Leslie began buying shelled cashew kernels from individual households. These were sun dried, the worst specimens removed, and the remainder exported in an unpeeled state to Marseilles and, occasionally, to London. Pierce Leslie's role was essentially that of middlemen.

Trial shipments to the United States began after the First World War, in response to a specific request and the method of packing in carbon dioxide was introduced (Langley, 1962). As the North American market grew, the exporting firms took to buying raw cashew nuts, and distributing them to households. Here they were roasted and shelled and returned to the firms for drying, peeling, grading and packing. By 1931, the processes of roasting and shelling had been centralised, Pierce Leslie alone having 17 workshops where these operations were undertaken. For the drying process preparatory to peeling, Pierce Leslie used racks arranged in the flues of the boiler in their coffee - curing establishment.

In 1932, the first technical innovation was made when the drum roaster was introduced. This was a long cylinder, tilted at one end and placed over a furnace. The nuts which were poured in from one end, ignited as they passed down the cylinder and collected at the other end, ready for shelling. This was followed in 1936 by the "Hot Oil Plant" by which cashew shell liquid (CSL), an industrial raw material, could be extracted. Industrial uses of CSL had been discovered in the United States, and after successfull trial shipments, an attempt was made to prevent the drums containing the liquid from bursting in transit. The successful resolution of this problem led to large demands for the liquid, and the Hot Oil Plant was developed so as to extract oil in quantity, without damaging the cashew kernels.

With the development of the export trade, the industry grew

in size very rapidly. While in 1923, 2000 cases were shipped, this grew to 1,00,000 cases in 1930, and 6,00,000 cases in 1939. By 1936-37 there were 20,000 workers in the industry in about 39 large workshops.

VIII

The Second World War and the run upto independence

The final decade of the pre-independence period was dominated by the Second World War. In Madras, the demand that this generated overwhelmed all other influences which might have retarded the growth of capital accumulation; however, in the absence of any capital goods industry in the country as a whole, and with supplies of equipment rationed within the British Empire there were few chances of the actual growth of the industry. The result was multiple-shift operation and neglect of preventive maintenance, but enormous profits were made on the increased prices and substantial accumulations of money capital (Bhogêndranath, 1957; Baker 1984).

The experience of the handloom industry in the war and post war years was in many ways the direct off-shoot of the profits made by the mill industry - expanding demand for yarn coupled with speculation, leading to enormous increases in prices. Under such conditions, with capital ever-withdrawing from the handloom industry, the position of the weavers was such as to create misery on a scale to which the Government was forced to respond

(Baker, 1984). It reorganised the apex cooperative society by providing greater funds and professional manpower. Through a process of incremental change, it gained control over the allocation of yarn supplies, and was able to requisition yarn for its collective weaving centres. In 1944 it took the logical step of prohobiting the production of non-standard cloth in the mill sector, and started the common production programme. Although this implied that it was largely the specialised markets that the handlooms had access to, it reflected a recognition of the enduring nature of the problem of reconciling the interests of handloom capitalists, if not handloom weavers, with those of textile mill owners.

Ironically, the post war period upto independence created the basis for further uncertainity, for with the return to peace time conditions and the lag in the ability of the mills to further increase capacity, a large internal and external market was temporarily created for handlooms. Between 1945 and 1948, when the mills achieved normal production, prices of handloom cloth soared, and the Government had to introduce a plethora of controls to keep domestic prices of handloom goods in order. By the time of independence, there was a close organisational nexus between handloom capitalists, and the Government of Madras.

Significant diversification of the economy seems to have taken place in the princely states. In Mysore, a determined effort was made in the late 1930s to establish an automobile manufacturing unit in collaboration with Walchand Hirachand, one of the pioneers of the Indian shipping industry (Hettne, 1978).

Visveswaraya acted as agent, and negotiations began for a joint venture with the Mysore Government, after the Government of Bombay refused to allow the project to develop there. The opposition originated with the Government of India, which objected to resources being utilised for such a project when the war situation demanded a different set of priorities. However, the objection could also have been due to the fact that American capital, not yet diverted to the war effort, was to provide support to the project and establish a bridge-head in the Indian economy. The alienation of the administration headed by Mirza Ismail from the State Congress, and Ismail's personal lack of rapport with a new Maharaja allowed the Government of India to intervene, change the Diwan and convert the project into an aircraft manufacturing one. This factory which manufactured U.S. designed aeroplanes during the war, was taken over by the U.S. Air Force and later reverted to the Government of India in the post-war period.

The intervention of relatively larger Indian capital from the Indian Presidencies was also seen in the invitation (by the Mirza Ismail regime) to Kirloskars to set up a factory at Harihar, which was to make machine tools. In Travencore, during the mid 1940s, it was immigration of capital from British India which was responsible for diversifying the economy, in technical collaboration with U.S. or British firms (Das, 1979; Mahadevan, 1988). Fertilizers and Chemicals Travencore (FACT) and Travencore Rayons were two such firms. In addition, capacity in aluminium cables and cement was established.

The coir industry also grew rapidly. In 1938 there were 249 coir manufactories in the villages, as compared to 41 in Alleppey itself; by 1944 these were estimated to have risen to 314 and 46 respectively. About two-thirds of the workers in the industry were by this time located in rural areas.

Although in Cochin the coir industry played an equally important role as in Travancore, the fibre was of poorer quality, and the firms specialised in the manufacture and export of yarn and ropes (India, 1945 a). While the yarn was spun by hand or by spinning wheel at home as in Travancore, rope making had a specific technology. The machine used, known as the Junk, employed about 30 people. By 1944, there were about 15 rope-making firms with 50 Junks in all. Export of rope was mainly to the Indian ports of Bombay, Kathiawar and Karachi, while Calcutta and Rangoon imported yarn and produced the rope.

During the initial stages of the war coir exports rose, but with shortage of shipping space and increasing control by the axis countries of the traditional markets, the industry was almost forced to close down. The Governments of Travancore and Cochin took up the matter with the Government of India, and secured orders for new uses of coir for munitions purposes. In fact, by the end of the war, shortage of competing fibres led to an appreciable growth in the demand for coir, and the Government introduced price control. The situation continued to be difficult for coir matting manufacturers in Cochin, as yarn of adequate quality had to be imported from Travancore. These problems of the shortage of supply of raw material combined with

the war-led demand for workers in Cochin Harbour and airport had forced the manufacturers there to concede a time - rate based system of working in the coir matting units.

The large scale investment of capital from the British Indian Presidencies may have been due to the operation of the excess profit duty, and the generally higher levels of taxation imposed during the war on firms in the Presidencies as opposed to the princely states. There was also positive inducement by the administrations of the princely states to capital from outside the state. Mysore and Travencore were major instances of this. While it was Marathi capital from Bombay (Kirloskar and Ogale) that went to Mysore, in Travencore capital from the Tamil parts of Madras Presidency predominated, although here too Ogale established a glass factory, while there was Gujarati capital in the rubber works and in plywood. The difference between these two states lay in the fact that while in Mysore some attempt had been made to associate local capital with at least the smaller firms promoted, no such policy existed in Travencore[12]. The few firms established by Travencorean industrialists had difficulty in raising capital, and the textile concerns had to go into partnership with Coimbatore based Tamil capital to survive (Mahadevan, 1988).

While the war and immediate post-war years were a time for substantial capital accumulations in money form, it was almost as difficult to translate these into industrial investments as had been the case after the First World War. The Indian capital

goods industry was still in a very early stage,[13] and the demands of post-war reconstruction in the advanced industrial countries diverted most production of such goods to their own home market.

The period also saw the growing dominence of the largest business groups, mostly based in Western and Eastern India, over all other industrialists. Although the Coimbatore textile industry represented a large concentration of production of yarn and of capital, even they found themselves subordinated in a textile policy geared to the requirements of the predominating Western India section of the industry (Mahadevan, 1987, pp.14-17). As far as the princely states were concerned, this tendency found its logical expression in a series of reports which, on the integration of the princely states, led in some cases to the integration of the more profitable state enterprises with the large empires built up by the pan-Indian industrialists (Subba Rao, 1988, p.16)[14].

South Indian industry which, at the time of independence, was showing faint signs of progressing to the stage of chemical based technology, was predominantly based on the production of agriculture based consumer goods Ferrous metallurgy could not develop in the absence of suitable coal deposits, inspite of the large scale presence of iron ore. The problems of attempting to overcome this handicap were well shown in the example of the Mysore Iron Works. In Travancore and Cochin, the absence of even a medium section of indigenous industrialists made the diversification from coir and cashew to modern industry precariously dependent on public sector investment, or on the

slim possibility of attracting large capital to a geographically isolated part of the country. In Hyderabad, an acute political struggle against the Nizam's autocratic regime dominated all other issues until the formation of Andhra Pradesh State almost 10 years later.

All-in-all, pre-independence industrial development had left an uneasy legacy for post independence South India.

Notes

1. Each of the major princely States had a resident representative or a "political agent" of the Government of India present in the administrative capital. Relationships between the Government of India and the ruling princely house were usually governed by treaties. See Ashton (1982).

2. For the more immediate purposes of this paper the works by Washbrook (1976) and Baker (1984) provide empirical support for Madras Presidency although their political conclusions are quite different.

3. The Nizam's support to the Government of India during the armed revolt of 1857 entitled Hyderabad to special treatment, for instance. See Subba Rao (1988, p.13). However, the fact that this autonomy was curtailed not only by the treaty legally framed, but also by the power of the political agent is clearly shown by Ray (1988).
Dr.Ashok Mitra has brought to my notice the need for greater clarity on the question of relative autonomy of the states. In the absence of substantial empirical work on fiscal and monetary management practices in the princely states, the proposition must remain a plausible hypothesis

4. An interesting case is that of the Gujarati capitalist Haji Ismail Sait, in Madras. He was given the all-India distributorship of Binnys yarn when the Buckingham Mill was established, and a place on the Board of the Carnatic Mills subsequently. However, by 1903, there was antagonism with Binnys over the dealership of imported kerosene, and this was compounded by the takeover by Ismail Sait of the Arbuthnots' industrial concerns in 1906. In 1913, an offer to buy the Chittavalsah jute mill, made by Binnys, was rejected by Ismail Sait and Binnys set up a rival mill nearby (DeSouza, 1969). It would appear that the Ismail Sait family was powerful enough to require the combined opposition of Binnys and Pierce Leslie, and the connivance of the local representative in India of the American kerosene manufacturers, before thes British Managing Agencies could freely develop their kerosene distribution networks (Langley, 1962).

5. See Hettne (1978) and Issac and Tharakan (1986) for the cases of Mysore and Travencore. For Madras see Washbrook (1976) and Swaminathan (1988). See also Rangaswami (1981).

6. Other major developments in Mysore during the period include an experimental silk farm established by J.N.Tata to develop methods of silkworm rearing, microscopic examination of the seed to eliminate diseased worms and better reeling practices. The farm was under Japanese management. Arbuthnots had started a sugar factory near Gonbidnur in

1893, while Gujarati capital floated the Mysore Spinning and Manufacturing Company in 1883. This was taken over by D.N. Sirur and Company in 1901, and was later made the base for their major textile interests in the 1930s (Imperial Gazetteer of India, 1908; Balkrishna, 1940).

7. These were the Hyderabad Spinning and Weaving Company (1877), the Gulbarga Mahbub Shahi Mills Company (1886), and the Aurungabad Spinning and Manufacturing Company (1889). The total paid up capital of the mills in 1909 was Rs.31 lakhs. The progress of the industry is given below:

Number of	1880-81	1890-91	1900-1901
Mills	1	3	3
Looms	169	443	459
Spindles	14958	50713	49465
Workers	583	2236	2490

Source: Imperical Gazetteer of India (1909)

8. For the origins of chemical industries in Madras, see Tyabji (1990)

9. These accounts are taken from the annual reports of the Department of Industries, Madras, for the years 1920-1937. They are important in that they cover both large scale industry (textiles, sugar, chemicals) and small scale capitalist industry (aluminium ware, hosiery, matches, oil and saw mills and so on)

10. This section is based on data on the annual statement of the cotton textile mills in Madras, sent to the Director General, Commercial Intelligence and Statistics, Calcutta. Data for the years 1920-21 to 1935-36 have been considered. Mahadevan (1973) and (1984), Baker (1984) and Bhogendranath (1957) have also been used.

11. In considering the problem of resettlement of the Kallars, one of the so-called criminal tribes, it was suggested by the Madras administration that a settlement could be established at the Madura Mills and the agent of the Mills made the settlement manager. The mills were said to want as many Kallar men, with women and children, as posible. By appointing the Madura Mills agent as the settlement manager, the draconian powers under the Criminal Tribes Act were transferred to their employers.

Note on Kilagudi Kallas by H.G. Clinch, Deputy Superintendent of Police, Madura, dated 14.3.1914 in Madras (1925) p.82 and p.90. I am grateful to Meena Radhakrishna for this reference.

It may be noted that the Bombay Textile Labour Enquiry Committee had expressly stated that the disciplinary measures under the Act prevented members of the community concerned from fully participating in trade union activities, and recommended that they should either be freed from the rules, or else not be employed in factories. See Bombay (1953) p.366.

12. In Hyderabad, the movement in favour of local personnel (the "mulki" rule) was a feature of the entire period under consideration. However the definition seems to have changed according to the composition of the ruling coterie at any point of time (Leonard, 1978). See also Ranjana Printers (1968).

13. For the case of the textile machinery industry, see Kirk and Simmons (1984).

14. The reports were written at the request of the Ministry of States by Kasturbhai Lalbhai, the prominent Ahmedabad textile millowner. While privatization took place in the case of Hyderabad, in Mysore no decision had been taken. (Baldwin, 1959, p.46 fn., p.57). The report for Travencore was published in 1951 (Mahadevan, 1988, fn.16).

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